DECISION NOTICE AND REPORT OF HANDLING

Application address - 14 Albert Terrace Edinburgh EH10 5EA

Application Ref. No - 19/00659/FUL

Review Ref No - 19/00101/REVREF

Review Lodged Date 12.07.2019

AC Architects
FAO: Allan Corfield
Lewis House
213 East Way
Hillend Industrial Estate
Hillend, Dunfermline
UK
KY11 9JF

Mr And Mrs Ian Wales
14 Albert Street
Edinburgh
Scotland
EH10 5EA

Date: **14 June 2019**,

Your ref:

TOWN AND COUNTRY PLANNING (SCOTLAND) ACTS

DEVELOPMENT MANAGEMENT PROCEDURE (SCOTLAND) REGULATIONS 2013

Demolition of existing garage to make way for extension to an existing home. This will create accessible living for family members in their old age.

At 14 Albert Terrace Edinburgh EH10 5EA

Application No: 19/00659/FUL

DECISION NOTICE

With reference to your application for Planning Permission registered on 12 February 2019, this has been decided by **Local Delegated Decision**. The Council in exercise of its powers under the Town and Country Planning (Scotland) Acts and regulations, now determines the application as **Refused** in accordance with the particulars given in the application.

Any condition(s) attached to this consent, with reasons for imposing them, or reasons for refusal, are shown below;

Conditions:-

Reason for Refusal:-

1. The proposed development is contrary to Edinburgh Local Development Plan policies Env 6 (Conservation Areas - Development) and Env 12 (Trees), as the loss of trees worthy of retention would result in a severe and adverse impact on the visual amenity of the streetscape and the character and appearance of the conservation area.

Please see the guidance notes on our decision page for further information, including how to appeal or review your decision.

Drawings 01, 02, 03, 04A, 05, 06, 07, represent the determined scheme. Full details of the application can be found on the Planning and Building Standards Online Services

The reason why the Council made this decision is as follows:

The proposed development does not comply with local development plan policies Env 6 (Conservation Areas - Development) and Env 12 (Trees), the Merchiston & Greenhill Conservation Area Character Appraisal. The proposal is not acceptable as the proposal would have an adverse impact on trees worthy of retention, to the detriment of the character and appearance of the Merchiston & Greenhill Conservation Area. There are no material considerations upon which to justify approval.

This determination does not carry with it any necessary consent or approval for the proposed development under other statutory enactments.

Should you have a specific enquiry regarding this decision please contact Peter Martin directly on 0131 469 3664.

D R Leslie

David R. Leslie
Chief Planning Officer
PLACE
The City of Edinburgh Council

NOTES

1. If the applicant is aggrieved by the decision to refuse permission for or approval required by a condition in respect of the proposed development, or to grant permission or approval subject to conditions, the applicant may require the planning authority to review the case under section 43A of the Town and Country Planning (Scotland) Act 1997 within three months beginning with the date of this notice. The Notice of Review can be made online at www.eplanning.scot or forms can be downloaded from that website. Paper forms should be addressed to the City of Edinburgh Planning Local Review Body, G.2, Waverley Court, 4 East Market Street, Edinburgh, EH8 8BG. For enquiries about the Local Review Body, please email localreviewbody@edinburgh.gov.uk.

2. If permission to develop land is refused or granted subject to conditions and the owner of the land claims that the land has become incapable of reasonably beneficial use in its existing state and cannot be rendered capable of reasonably beneficial use by carrying out of any development which has been or would be permitted, the owner of the land may serve on the planning authority a purchase notice requiring the purchase of the owner of the land's interest in the land accordance with Part 5 of the Town and Country Planning (Scotland) Act 1997.

Report of Handling

Application for Planning Permission 19/00659/FUL
At 14 Albert Terrace, Edinburgh, EH10 5EA
Demolition of existing garage to make way for extension to an existing home. This will create accessible living for family members in their old age.

Item	Local Delegated Decision
Application number	19/00659/FUL
Wards	B10 - Morningside

Summary

The proposed development does not comply with local development plan policies Env 6 (Conservation Areas - Development) and Env 12 (Trees), the Merchiston & Greenhill Conservation Area Character Appraisal. The proposal is not acceptable as the proposal would have an adverse impact on trees worthy of retention, to the detriment of the character and appearance of the Merchiston & Greenhill Conservation Area. There are no material considerations upon which to justify approval.

Links

Policies and guidance for this application	LDPP, LDES12, LEN06, LEN12, NSG, NSHOU, NSLBCA, CRPMER,

Report of handling

Recommendations

1.1 It is recommended that this application be Refused for the reasons below..

Background

2.1 Site description

The application property is a modern two storey dwellinghouse, located on the north side of Albert Terrace. There is an existing detached garage, positioned to the side of the main house.

This application site is located within the Merchiston And Greenhill Conservation Area.

2.2 Site History

01.10.1996 - Planning permission granted to erect a conservatory (reference: 96/02091/FUL).

31.05.2011 - Planning permission granted to replace copper roof covering (platform roof) with green mineral felt and insulation (reference: 11/01108/FUL).

Main report

3.1 Description Of The Proposal

The application proposes the construction of a single storey side extension. The extension will project beyond the front elevation of the main house. The existing detached garage is to be demolished to facilitate the proposed development.

This is a householder planning application, and does not propose any material change of use or the formation of a new planning unit. The extension would be ancillary accommodation to the existing dwellinghouse. The assessment of this application relates to the operational development only.

Previous Scheme

The submitted drawings have been amended, removing the reference to a kitchen within the extension.

Supporting Statement

This application includes a Arboricultural Survey which is available to view on the Planning and Building Standards online services.

3.2 Determining Issues

Section 25 of the Town and Country Planning (Scotland) Act 1997 states - Where, in making any determination under the planning Acts, regard is to be had to the development plan, the determination shall be made in accordance with the plan unless material considerations indicate otherwise.

Section 64 of the Planning (Listed Buildings and Conservation Areas) (Scotland) Act 1997 states - special attention shall be paid to the desirability of preserving or enhancing the character or appearance of the conservation area.

Do the proposals comply with the development plan?

If the proposals do comply with the development plan, are there any compelling reasons for not approving them?

If the proposals do not comply with the development plan, are there any compelling reasons for approving them?

3.3 Assessment

To address these determining issues, it needs to be considered whether:

a) The proposal is an acceptable scale, form and design;

b) The proposal will have an adverse impact on protected trees worthy of retention on or around the application site;

c) The proposal will preserve or enhance the character and appearance of the conservation area;

d) The proposal will result in an unacceptable loss to neighbouring amenity;

e) Any impacts on equalities and human rights are acceptable;

f) Any comments raised have been addressed.

a) The application property is a modern two storey dwellinghouse. The proposed extension is of an acceptable scale, form and design.

b) The proposed development is immediately adjacent to three trees. This includes one Common Horse Chestnut, one Sycamore and one Common Lime. Although not specifically protected by a Tree Preservation Order, they are protected by virtue of being located within a Conservation Area.

Edinburgh Local Development Plan policy Env 12 (Trees) states that development will not be permitted if likely to have a damaging impact on a tree protected by a Tree Preservation Order or on any other tree or woodland worthy of retention unless necessary for good arboricultural reasons.

The Council's Arboricultural Officer has considered the proposal and advised that the proposed development is likely to have a damaging impact on the trees. The Sycamore tree in particular is unlikely to survive due to the impact of the development on the tree's root protection area. In addition, if planning permission was granted for the development there would be future pressure on cutting back/removing this Sycamore tree due to the positioning of habitable

accommodation immediately below the tree. Living accommodation would be treated differently to a non-habitable garage. Habitable accommodation introduces a 'static' human target, hugely increasing the risk compared to garage or driveway where people tend to be present for a very short moment in time.

The trees, by virtue of their scale and maturity, are of a high amenity value, making a significant contribution to the landscape character of the street and this part of the conservation area. The loss of these trees would have a severe and adverse impact on the visual amenity of the streetscape and the character and appearance of the conservation area.

The proposed development would have a damaging impact on trees worthy of retention on or around the application site, contrary to Local Development Plan Policy Env 12.

c) The Merchiston & Greenhill Conservation Area Character Appraisal emphasises that individual trees within gardens play a significant role in creating the character of the conservation area. Particular attention should be given to existing trees when considering changes to any development layout in the area.

The Edinburgh Local Development Plan policy Env 6 states that development within a conservation area or affecting its setting will be permitted which preserves trees, hedges, boundary walls, railings, paving and other features which contribute positively to the character of the area.

The Conservation Area Character Appraisal quoted above is specific in citing that individual trees within gardens play a significant role in creating the character of the Merchiston & Greenhill conservation area.

The trees, by virtue of their scale and maturity, are of a high amenity value, making a significant contribution to the landscape character of the street and this part of the conservation area. The loss of these trees would have a severe and adverse impact on the visual amenity of the streetscape and the character and appearance of the conservation area.

The proposed development would have an adverse effect on the character and appearance of the conservation area, contrary to Edinburgh Local Development Plan policy Env 6.

d) The proposal fully accords with the criteria in the 'Guidance for Householders' in relation to the protection of neighbouring amenity.

e) The application was assessed in terms of equalities and human rights. No impact was identified.

f) Public comments

Material Representations:

- Potential damage to the root system of the protected mature trees in the grounds of 8 Abbotsford Crescent - This has been addressed in 3.3c.

It is recommended that this application be Refused for the reasons below.

3.4 Conditions/reasons/informatives

Risk, Policy, compliance and governance impact

4.1 Provided planning applications are determined in accordance with statutory legislation, the level of risk is low.

Equalities impact

5.1 The equalities impact has been assessed as follows:

The application has been assessed and has no impact in terms of equalities or human rights.

Consultation and engagement

6.1 Pre-Application Process

Pre-application discussions took place on this application.

6.2 Publicity summary of representations and Community Council comments

The associated application for Conservation Area Consent (application reference: 19/00660/CON) attracted one representation, neither objecting to nor supporting the planning application.

A full assessment of the representation can be found in the main report in the Assessment section.

Background reading / external references

- To view details of the application go to
- Planning and Building Standards online services

David R. Leslie

Statutory Development Plan Provision	Edinburgh Local Development Plan.
Date registered	12 February 2019
Drawing numbers/Scheme	01, 02, 03, 04A, 05, 06, 07 Scheme 2

Acting Head of Planning and Building Standards

Contact: Peter Martin, Planning officer
E-mail:peter.martin@edinburgh.gov.uk Tel:0131 469 3664

Links - Policies

Relevant Policies:

Relevant policies of the Local Development Plan.

LDP Policy Des 12 (Alterations and Extensions) sets criteria for assessing alterations and extensions to existing buildings.

LDP Policy Env 6 (Conservation Areas - Development) sets out criteria for assessing development in a conservation area.

LDP Policy Env 12 (Trees) sets out tree protection requirements for new development.

Relevant Non-Statutory Guidelines

Non-statutory guidelines 'GUIDANCE FOR HOUSEHOLDERS' provides guidance for proposals to alter or extend houses or flats.

Non-statutory guidelines 'LISTED BUILDINGS AND CONSERVATION AREAS' provides guidance on repairing, altering or extending listed buildings and unlisted buildings in conservation areas.

The Merchiston & Greenhill Conservation Area Character Appraisal emphasises the consistent domestic grain, scale and building mass; the high quality stone built architecture of restricted height, generous scale and fine proportions enclosed by stone boundary walls and hedges which define the visual and physical seclusion of the villas; the uniformity resulting from the predominant use of traditional building materials; and the predominance of residential uses within the area

Appendix 1

Consultations

No Consultations received.

END

THE CITY OF EDINBURGH COUNCIL

Business Centre G.2 Waverley Court 4 East Market Street Edinburgh EH8 8BG Tel: 0131 529 3550 Fax: 0131 529 6206 Email: planning.systems@edinburgh.gov.uk

Applications cannot be validated until all the necessary documentation has been submitted and the required fee has been paid.

Thank you for completing this application form:

ONLINE REFERENCE 100153406-005

The online reference is the unique reference for your online form only. The Planning Authority will allocate an Application Number when your form is validated. Please quote this reference if you need to contact the planning Authority about this application.

Applicant or Agent Details

Are you an applicant or an agent? * (An agent is an architect, consultant or someone else acting on behalf of the applicant in connection with this application) ☐ Applicant ☒ Agent

Agent Details

Please enter Agent details

Company/Organisation:	AC Architects		
Ref. Number:		You must enter a Building Name or Number, or both: *	
First Name: *	Allan	Building Name:	Lewis House
Last Name: *	Corfield	Building Number:	213
Telephone Number: *	01383 737101	Address 1 (Street): *	East Way
Extension Number:		Address 2:	Hillend Industrial Estate
Mobile Number:		Town/City: *	Hillend, Dunfermline
Fax Number:		Country: *	UK
		Postcode: *	KY11 9JF
Email Address: *	info@acarchitects.biz		

Is the applicant an individual or an organisation/corporate entity? *

☒ Individual ☐ Organisation/Corporate entity

Applicant Details

Please enter Applicant details

Title:	Mr	You must enter a Building Name or Number, or both: *	
Other Title:		Building Name:	14
First Name: *	Ian	Building Number:	
Last Name: *	Wales	Address 1 (Street): *	Albert
Company/Organisation		Address 2:	Terrace
Telephone Number: *	[redacted]	Town/City: *	Edinburgh
Extension Number:		Country: *	Scotland
Mobile Number:	[redacted]	Postcode: *	EH10 5EA
Fax Number:			
Email Address: *			

Site Address Details

Planning Authority:	City of Edinburgh Council

Full postal address of the site (including postcode where available):

Address 1:	14 ALBERT TERRACE
Address 2:	
Address 3:	
Address 4:	
Address 5:	
Town/City/Settlement:	EDINBURGH
Post Code:	EH10 5EA

Please identify/describe the location of the site or sites

Northing	671583	Easting	324292

Description of Proposal

Please provide a description of your proposal to which your review relates. The description should be the same as given in the application form, or as amended with the agreement of the planning authority: *
(Max 500 characters)

Demolition of existing garage to make way for the extension to an existing home to create accessible living for family members in their old age.

Type of Application

What type of application did you submit to the planning authority? *

☒ Application for planning permission (including householder application but excluding application to work minerals).

☐ Application for planning permission in principle.

☐ Further application.

☐ Application for approval of matters specified in conditions.

What does your review relate to? *

☒ Refusal Notice.

☐ Grant of permission with Conditions imposed.

☐ No decision reached within the prescribed period (two months after validation date or any agreed extension) – deemed refusal.

Statement of reasons for seeking review

You must state in full, why you are a seeking a review of the planning authority's decision (or failure to make a decision). Your statement must set out all matters you consider require to be taken into account in determining your review. If necessary this can be provided as a separate document in the 'Supporting Documents' section: * (Max 500 characters)

Note: you are unlikely to have a further opportunity to add to your statement of appeal at a later date, so it is essential that you produce all of the information you want the decision-maker to take into account.

You should not however raise any new matter which was not before the planning authority at the time it decided your application (or at the time expiry of the period of determination), unless you can demonstrate that the new matter could not have been raised before that time or that it not being raised before that time is a consequence of exceptional circumstances.

Our planning application was not dealt with in a timely manner. We believe that supporting documentation, guidance notes provided by our Aborculturalist & communication regarding protecting the conservation area including the trees on site, compliant with policy, has not been given proper consideration. Therefore we believe that the grounds upon which our refusal has been issued are unfair and inaccurate. Please see our supporting document for further detail.

Have you raised any matters which were not before the appointed officer at the time the Determination on your application was made? * ☒ Yes ☐ No

If yes, you should explain in the box below, why you are raising the new matter, why it was not raised with the appointed officer before your application was determined and why you consider it should be considered in your review: * (Max 500 characters)

We have included precedent in our supporting document of proposals, recently approved & built in the ECC conservation area with similar/closer proximity to trees than our proposal. The precedent contradicts the reason for our refusal. We didn't include this at the time as we felt that the information provided by our arborculturalist & willingness to suggest conditions attached to an approval to ensure compliance with the protection of trees would be sufficient to support approval.

Please provide a list of all supporting documents, materials and evidence which you wish to submit with your notice of review and intend to rely on in support of your review. You can attach these documents electronically later in the process: * (Max 500 characters)

Proposed Floor Plans, Proposed Elevations, Proposed Site Plan, Existing Drawings, Contextual Images, 3D Images, 3D Visualisations, Location Plan, 14 Albert Terrace tree report, SGN-3-Ground-protection, SGN-8-Removing-surfacing-and-structures-in-root-protection-areas, SGN-9-Installing-upgrading-surfacing-in-root-protection-areas, SGN-10-Installing-structures-in-root-protection-areas, SGN-11-Installing-services-in-root-protection-areas, SGN-12-Landscaping-in-root-protection-areas & Appeal Document

Application Details

Please provide details of the application and decision.

What is the application reference number? * 19/00659/FUL

What date was the application submitted to the planning authority? * 11/02/2019

What date was the decision issued by the planning authority? * 14/06/2019

Review Procedure

The Local Review Body will decide on the procedure to be used to determine your review and may at any time during the review process require that further information or representations be made to enable them to determine the review. Further information may be required by one or a combination of procedures, such as: written submissions; the holding of one or more hearing sessions and/or inspecting the land which is the subject of the review case.

Can this review continue to a conclusion, in your opinion, based on a review of the relevant information provided by yourself and other parties only, without any further procedures? For example, written submission, hearing session, site inspection. *

☒ Yes ☐ No

In the event that the Local Review Body appointed to consider your application decides to inspect the site, in your opinion:

Can the site be clearly seen from a road or public land? * ☐ Yes ☒ No

Is it possible for the site to be accessed safely and without barriers to entry? * ☐ Yes ☒ No

If there are reasons why you think the local Review Body would be unable to undertake an unaccompanied site inspection, please explain here. (Max 500 characters)

There are locked gates and walls which would not permit entry to the site. Please contact our client directly to organise an inspection, they will be happy to assist.

Checklist – Application for Notice of Review

Please complete the following checklist to make sure you have provided all the necessary information in support of your appeal. Failure to submit all this information may result in your appeal being deemed invalid.

Have you provided the name and address of the applicant?. * ☒ Yes ☐ No

Have you provided the date and reference number of the application which is the subject of this review? * ☒ Yes ☐ No

If you are the agent, acting on behalf of the applicant, have you provided details of your name and address and indicated whether any notice or correspondence required in connection with the review should be sent to you or the applicant? * ☒ Yes ☐ No ☐ N/A

Have you provided a statement setting out your reasons for requiring a review and by what procedure (or combination of procedures) you wish the review to be conducted? * ☒ Yes ☐ No

Note: You must state, in full, why you are seeking a review on your application. Your statement must set out all matters you consider require to be taken into account in determining your review. You may not have a further opportunity to add to your statement of review at a later date. It is therefore essential that you submit with your notice of review, all necessary information and evidence that you rely on and wish the Local Review Body to consider as part of your review.

Please attach a copy of all documents, material and evidence which you intend to rely on (e.g. plans and Drawings) which are now the subject of this review * ☒ Yes ☐ No

Note: Where the review relates to a further application e.g. renewal of planning permission or modification, variation or removal of a planning condition or where it relates to an application for approval of matters specified in conditions, it is advisable to provide the application reference number, approved plans and decision notice (if any) from the earlier consent.

Declare – Notice of Review

I/We the applicant/agent certify that this is an application for review on the grounds stated.

Declaration Name: Mr Allan Corfield

Declaration Date: 12/07/2019

Proposal Details

Proposal Name	100153406
Proposal Description	Extension to existing home
Address	14 ALBERT TERRACE, EDINBURGH, EH10 5EA
Local Authority	City of Edinburgh Council
Application Online Reference	100153406-005

Application Status

Form	complete
Main Details	complete
Checklist	complete
Declaration	complete
Supporting Documentation	complete
Email Notification	complete

Attachment Details

Notice of Review	System	A4
SGN-3-Ground-protection	Attached	A4
SGN-8-Removing-surfacing-and-structures-in-root-protection-areas	Attached	A4
SGN-9-Installing-upgrading-surfacing-in-root-protection-areas	Attached	A4
SGN-10-Installing-structures-in-root-protection-areas	Attached	A4
SGN-11-Installing-services-in-root-protection-areas	Attached	A4
SGN-12-Landscaping-in-root-protection-areas	Attached	A4
Tree Report	Attached	A4
282-702 3D Visualisations	Attached	A3
282-701 3D Images	Attached	A3
282-700 Contextual Images	Attached	A3
282-104 Existing Drawings	Attached	A1
282-103 Proposed Site Plan	Attached	A1
282-102 Proposed Elevations	Attached	A1
282-101-G Proposed Floor Plans	Attached	A1
282 14 Albert Terrace Supporting Statement	Attached	A4
Notice_of_Review-2.pdf	Attached	A0
Application_Summary.pdf	Attached	A0
Notice of Review-005.xml	Attached	A0

Allan Corfield Architects
The Self Build Experts

Appeal Document

Planning Reference Number: 19/00659/FUL and 19/00660/CON
Address: 14 Albert Terrace, Edinburgh, EH10 5EA
Client: Ian and Sue Wales

Introduction:

We are submitting this document to support our appeal and the approval of our application for the demolition of an existing garage to be replaced by an extension to support our clients continuing to live in their home alongside family members, providing both care and independence in old age.

Below we have provided a timeline of the communication between ourselves, our planning officer Peter Martin (PM) and our tree Aborculturalist Mike Charkow (MC) and a summary of why we believe that this application should be approved.

Timeline of Communication:

1. **Monday 11th Feb 2019** - Planning Application Submitted
2. **Monday 18th Feb 2019** – Acknowledgement letters of applications received from noreply@scot.gov
3. **Thursday 14th March 2019** - ACA Call Peter Martin Planner (No response)
4. **Friday 15th March 2019** – ACA Email Peter Martin Planner (No response)
5. **Monday 18th March 2019** - ACA Call Peter Martin Planner- leave voicemail (No response)
6. **Monday 25th March 2019 am** - ACA Call Peter Martin Planner-Call is connected, PM takes client contact details to arrange site visit.
7. **Monday 25th March 2019 pm** - PM carries out site visit.
8. **Wednesday 27th March – 9th April**- Called Peter Martin Planner several times (No response)
9. **Wednesday 10th April** - ACA Call Peter Martin Planner-Call is connected, PM discusses his feedback on the proposal
10. **Wednesday 11th April –** Original determination date. I email PM to confirm his feedback and to request an extension of time:

Dear Peter,

Further to our conversation yesterday on the phone regarding the proposal at 14 Albert Terrace, 19/00659/FUL. I am writing to confirm your following feedback:

Although the building design would be acceptable, the application would be refused on the basis of the mature trees lining the boundary in the neighbouring land and the impact of the proposal on the roots and canopy's of these trees.

I note that you have advised that we could resubmit a smaller extension which would create less impact on the trees, but you cannot guarantee that this would be approved. A tree survey with a method statement/mitigation strategy showing how any harm would be prevented to the trees should be provided.

I note that you referred me to the planning guidance regarding this which I have read. However, I must convey extreme disappointment on behalf of our practice and my client that these issues were not raised with us sooner, so that we could provide the relevant information required for the application. I have contacted you on several occasions, left messages to ask if you required further information and what your opinion on the proposal was. When we last spoke I was informed that you would contact me straight away should any issues arise that would affect the application. I am aware that you/one of your colleagues visited the site on the 25th of March and it has taken a further two and a half weeks to be made aware of the above situation and only the day before the decision date. Which, needless to say, is too late.

This result, which could have been avoided by a much earlier conversation, will now impact our client personally with their time and finances.

We have spoken to our client to advise them of the above and that the best course of action would be to withdraw and resubmit as final course of action. However, prior to confirming how we will proceed, I would be grateful, given the circumstances, if you would consider providing us with an extension of 4 weeks to enable us to provide the relevant survey information and make any required changes to the application. Please could you advise whether this is possible and how long it would take for additional information to be processed for a further decision?

Thank you in advance.

Kind Regards,

11. **Tuesday 16th April-** PM responds to our request for an extension of time:

Thank you for your email.

Allan Corfield Architects

The Self Build Experts

Please note that there are significant workload issues within the team due to an increase in applications and also a loss of 2 members from the team. As a service, we are implementing measures to address these issues through recruitment and re-organisation. Please accept my apologies for any delay in getting back to you.

Notwithstanding the above, the planning authority could have determined the application, as submitted, within the statutory time period. I contacted you on Wednesday 10th April, before the determination date. There was no opportunity to consider the application in any detail before this date.

If you wish to submit a revised proposal and tree survey, please propose a suitable extension of time for these documents to be prepared and sufficient time for these to be assessed by the planning authority.

Yours sincerely

Peter Martin.

12. **Thursday 18th April -** Client Appoints Mike Charkow Principal Arboriculturist at Arbor Vitae Arboriculture Ltd to carry out tree survey.
13. **Thursday 18th April** - ACA respond to PM:

We are currently in the process of organising the required tree survey with a view to this information being available as soon as possible. At this stage we would suggest that an 8 week extension might be an appropriate timescale to allow suitable time for us to prepare revised proposals and for assessment of these by the planning authority.

Our suggested target date for a decision would therefore be Friday 14th June, however, we would hope that our application could be determined prior to then should we provide the information in time to do so.

We trust that our proposed timescales will be acceptable and we look forward to receiving confirmation from you.

Kind regards,

14. **Tuesday 7th May-** ACA call to follow up email on the 18th of April for confirmation of extension of time, no response, left voicemail.

15. **Tuesday 7th May-** ACA send follow up email with tree report attached and request confirmation of the 8 week extension of time creating a determination date of 14th of June.

16. **Wednesday 8th May** - PM confirms extension of time creating a determination date of 14th of June.

17. **Wednesday 22nd May** - PM calls ACA to discuss tree survey. ACA email Peter to request written feedback and asking the following queries:

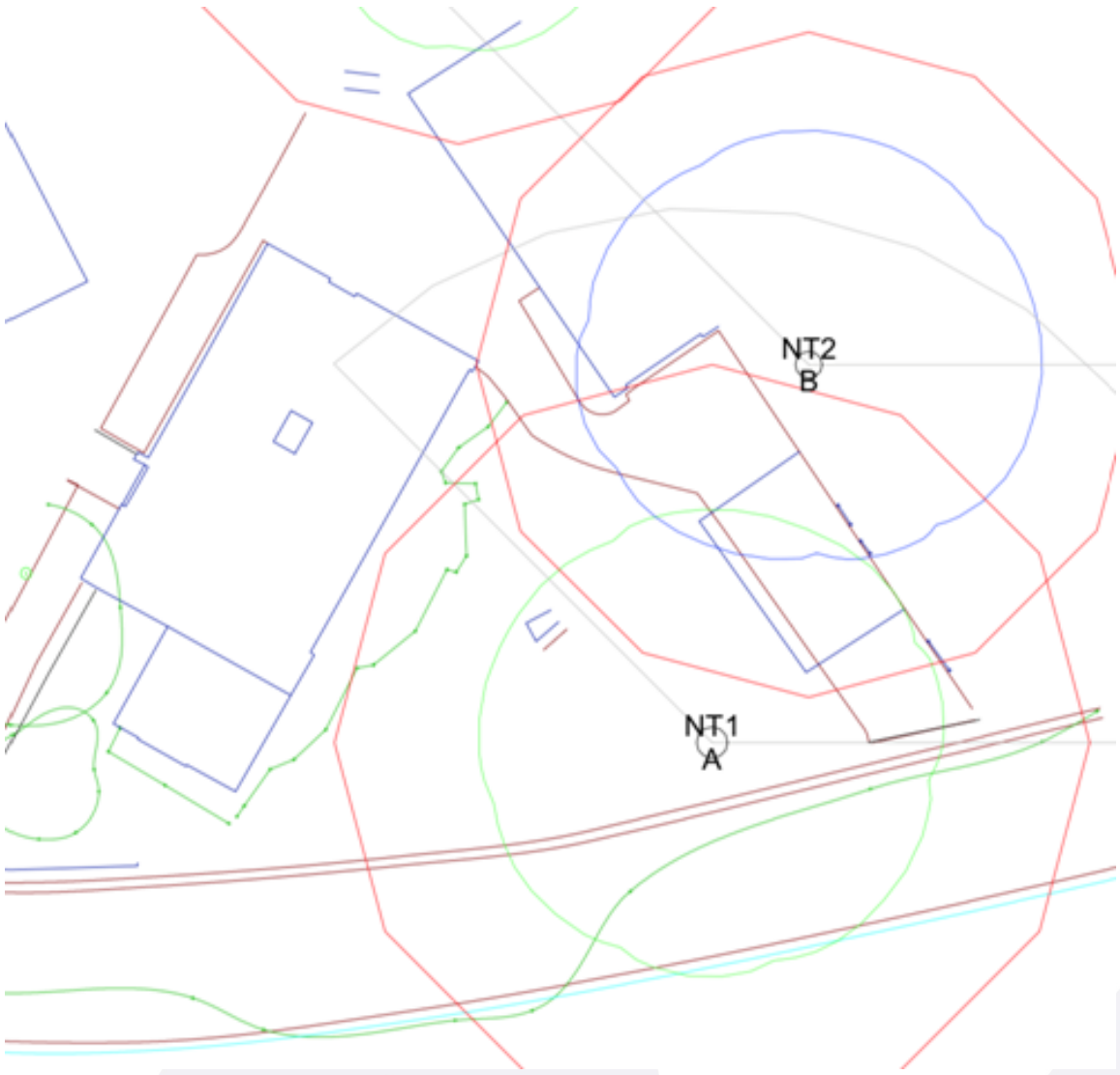
Thanks for your call regarding 14 Albert Terrace: 19/00659/FUL and 19/00660/CON.

Following our conversation, please could you confirm in writing the comments you have received from the ECC tree consultant for our records.

I noted that our intention was to seek further advice regarding foundation type suitable for the trees from our tree surveyor/engineer and asked whether this information could be a condition of planning approval. Please can you confirm whether this would be acceptable.

You noted that the extension proposal may be acceptable if it was reduced back behind the crown spread (blue line) of NT2 shown below:

Allan Corfield Architects
The Self Build Experts



I asked if it would be possible for any reduction to the proposed extension to be limited to the extent of the existing garage. We would argue that the new development if limited to this extent, along with the construction of suitable foundations would provide no worse impact on the trees than the existing conditions. Please can you confirm whether this would be acceptable.

Please could you provide a written response for these points, so we may advise our client further. Thank you.

I look forward to hearing from you at your earliest convenience.

Kind Regards,

18. **Thursday 23rd May** – PM responds by email:

The two tree issues are:

1. Impact of the development on the tree's root protection area;
2. If planning permission was granted, the future pressure on cutting back/removing the tree due to the positioning of habitable accommodation immediately below the tree.

I have responded to your other queries in turn:

I noted that our intention was to seek further advice regarding foundation type suitable for the trees from our tree surveyor/engineer and asked whether this information could be a condition of planning approval. Please can you confirm whether this would be acceptable.

- *Firstly, the foundation type is not the issue. Too much of the root protection area is affected. Notwithstanding, any such condition would not make the development acceptable as it would not address the future pressure concerns.*

I asked if it would be possible for any reduction to the proposed extension to be limited to the extent of the existing garage. We would argue that the new development if limited to this extent, along with the construction of suitable foundations would provide no worse impact on the trees than the existing conditions. Please can you confirm whether this would be acceptable.

- *This would not be acceptable. In terms of future pressure on cutting back/removing the tree, living accommodation would be treated differently to a non-habitable garage. Habitable accommodation introduces a 'static' human target, hugely increasing the risk compared to garage or driveway where people tend to be present for a very short moment in time.*

As discussed, a reduced proposal more in line with the existing house is likely to be considered acceptable.

Please let me know how you wish to proceed with the application.

Yours sincerely

Allan Corfield Architects
The Self Build Experts

19. **Tuesday 28th May** – ACA request further information from PM:

Thanks for your response.

Further to your comments, could you send me the official report from the ECC Tree Consultant please? Thanks.

20. **Tuesday 28th May** – Response from PM:

There is no formal consultation. For the reasons set out in the email below the planning application would be refused by the planning authority as it is contrary to Edinburgh Local Development Plan policies Env 12 (Trees) and Env 6 (Conservation Areas – Development).

Policy Env 12 (Trees) states that development will not be permitted if likely to have a damaging impact on a tree protected by a Tree Preservation Order or on any other tree or woodland worthy of
retention unless necessary for good arboricultural reasons. Where such permission is granted, replacement planting of appropriate species and numbers will be required to offset the loss to amenity.

Policy Env 6 (Conservation Areas – Development) states that development within a conservation area or affecting its setting will be permitted which:

a) preserves or enhances the special character or appearance of the conservation area and is consistent with the relevant conservation area character appraisal
b) preserves trees, hedges, boundary walls, railings, paving and other features which contribute positively to the character of the area and
c) demonstrates high standards of design and utilises materials appropriate to the historic environment

Please let me know how you wish to proceed with the application.

Kind regards

21. **Tuesday 28th May** – ACA request a professional opinion from Mike Charkow Principal Arboriculturist at Arbor Vitae Arboriculture Ltd on feedback given by PM.
22. **Tuesday 28th May** - Response from Mike Charkow Principal Arboriculturist at Arbor Vitae Arboriculture Ltd

Please see my comments after your points:

1. *What would be a suitable level of development within the root protection area?*

It is possible to build within an RPA, and this has been done many times throughout the UK. The key is to using the correct engineering techniques, as I have stated in my report:

1. *3.9 Special engineering techniques do exist to that allow development to take place within a tree's RPA with minimal impact to the trees. These include special foundation techniques such as piling, pads and cantilevering. For lightweight structures, it may also be possible to use a three-dimensional load-spreading geotextile.*
2. *3.10 For tree roots to survive they require uncompacted soil that has access to air and water. Considering this, the best solution would be to build above ground level, so there is an air gap. It may also be necessary to direct rainwater beneath the new extension.*

1. *What is the future pressure on cutting back?*

I am not sure of the exact council policy on this, however the concern seems genuine. The risk is indeed increased by constructing living areas beneath a tree and this can increase the likelihood of the occupant wanting the tree to be pruned or removed. One possible mitigation is to have the tree inspected regularly. However, although this would reduce the risk of the tree causing damage or harm, it may not reduce the occupants' levels of concern at living beneath a mature tree, so the potential for pressure to request work to the tree may not diminish significantly.

1. *Does NT2 need to be removed/cut back as it is if it is as much of a risk as planning seem to suggest? (The tree report notes the quality of the tree as MODERATE Southern Inter-buttress basal decay with robust wound wood.)*

I don't see any comments from planning regarding the risk from NT2. I have recommended no work to this tree - it has some decay but the tree has responded with robust reaction wood to counter the loss of wood.

Regarding RPAs, there is some uncertainty over the actual rooting areas, as I have said in the report:

1. *3.4 The root protection areas (RPAs) of the trees are shown as circles, however the actual root spread may be quite different. There are several potential root barriers present such as boundary walls, hard surfacing, a concrete plinth (beneath the garage), a pavement and a road. The actual root spread may need to be determined using specialist equipment.*

It may be that the RPA of NT2 does not extend beyond the wall to the southwest - similar for NT3. However it is likely there will be some rooting from NT1 in the area marked for development. Whether this has been constricted by the low wall and hard surfacing is unknown, though it could be investigated using ground penetrating radar, should your clients feel it was worth the cost, and the planners still reject special engineering techniques for building. Of course, the issue of increased risk and pressure for work to the tree would still exist.

23. **Tuesday 28th May** - Mike Charkow Principal Arboriculturist at Arbor Vitae Arboriculture Ltd provides *Jeremy Barrell's guidance notes on development within rooting areas.*

24. **Thursday 6th June** – ACA respond to PM's response to tree survey information email & include *Jeremy Barrell's guidance notes on development within rooting areas.*

Thank you for your email, following our last correspondence I have spoken to both our client and tree surveyor.

On behalf of our client I can confirm that Mr and Mrs Wales would like to proceed with the application with the design as it stands.

You noted the following policy in relation to our application:

Policy Env 12 (Trees) states that development will not be permitted if likely to have a damaging impact on a tree protected by a Tree Preservation Order or on any other tree or woodland worthy of retention unless necessary for good arboricultural reasons. Where such permission is granted, replacement planting of appropriate species and numbers will be required to offset the loss to amenity.

Policy Env 6 (Conservation Areas – Development) states that development within a conservation area or affecting its setting will be permitted which:

> *a) preserves or enhances the special character or appearance of the conservation area and is consistent with the relevant conservation area character appraisal*
> ***b) preserves trees, hedges, boundary walls, railings, paving and other features which contribute positively to the character of the area and***
> *c) demonstrates high standards of design and utilises materials appropriate to the historic environment*

We believe that we are not proposing any damage to the trees and are not opposing the retention of the trees in question and therefore our design should be supported. (To clarify these trees do not have TPO's). Our aim is to preserve the trees, hedges, boundary walls, railings etc of the existing site in line with the above Policy Env 6.

Our argument for the approval of our application is as follows:

- *Our tree surveyor has reiterated that it is possible to build within the RPA without affecting the tree with considered engineering and arboricultural techniques, please note 3.9 and 3.10 of the tree report submitted. Please see the attached forms from Mike Charkow Principal Arboriculturist at AV Arboriculture Ltd providing further information regarding construction techniques for building in and around trees.*
- *Our tree surveyor has reiterated that as per point 3.4 of his tree report that the actual root spread of the trees may be quite different from what is shown in the report. There are several potential root barriers present such as boundary walls, hard surfacing, a concrete plinth (beneath the garage), a pavement and a road. It may be that the RPA of NT2 does not extend beyond the wall to the southwest - similar for NT3. The root spread could be further investigated using ground penetrating radar, this could be added as a condition of a planning approval to ensure suitable measures are planned for prior to works commencing on site.*
- *Regular tree inspection will ensure that our client could continue living in mutual symbiosis with the tree. In this case we suggest that a condition be applied to the permission for regular monitoring of the trees by an expert.*
- *Any potential pruning or removal of a tree close to a house extension will not be carried out unless necessary for good aboricultural reasons resulting from regular monitoring noted above in compliance with Policy Env 12.*
- *Our client is aware that a small part of the extension will be under the canopy of a mature tree but is happy with this and does not have any concerns. The trees surrounding the site have been noted as healthy and as such stable. If the trees were to become diseased/rotten this would be picked up by the monitoring process and would be dealt with as per the aborculturist's advice and in line with policy Env 12 and 6.*
- *Our client notes that the small risk for them from the existing healthy trees is far outweighed by the benefits that the extension would bring to their family and note that multigenerational living should be being encouraged due to the housing and care crisis in Scotland.*

Please provide your comments on the above, we look forward to hearing from you in due course.

Kind Regards,

25. 14th June 2019 – ACA receive refusal determination from noreply@scot.gov

Allan Corfield Architects
The Self Build Experts

Summary

Communication and response time from our planning officer was poor from the start. We are aware that with all projects there may be further information required by planning officers in order for them to determine their decision. We diligently contacted PM on at least 8 occasions between acknowledgement of the application and first feedback (**2./9.**). ACA asked PM whilst discussing the organisation of a site visit (**6.**) to be in contact should there be any concerns, but only received feedback communicating the issues on the day before the original deadline (**10.**). This is in our view is completely unacceptable, the project was not assessed in a timely manner and did not give us the opportunity to prepare the required information within the deadline. On receiving feedback regarding the trees in the next door neighbours garden, we requested a tree survey straight away though we had not yet received confirmation of an EoT.

We believe that our client's application, supporting documents & consultants opinions have not been properly considered, and that the refusal is an unfounded decision for the following reasons:

A. The tree survey noted that none of the trees had TPO's, they are in good health, that there are suitable methods for working around the RPA's and noted that further exploration would help identify more accurately the spread of roots and which construction methods would be most appropriate to protect the roots. The tree surveyor later supplied extensive guidance notes on construction and RPA's which we also submitted to PM (**15./24.**) (Please find both the tree survey/report and guidance notes attached). As you can see from the photograph provided below, the canopy of the tree between the existing garage & car shelter in the neighbouring garden is much higher than the roof of the garage and would be higher than the proposed extension:

B. Our tree survey and guidance notes were considered by PM, but not by any other specialist tree consultant within ECC. Considering our client supplied documentation from a qualified expert Aborculturalist, we do not understand why this has been bypassed by a planner who we assume has less expertise on the matter? Our consultant gave guidance that the proposal could be safely constructed.
C. At no point in our application did we propose damage, lopping or the removal of the existing trees, in fact we promoted the protection of the trees. ACA stated on behalf of our client their willingness to take measures of prevention (Further testing), mitigation (specialist construction methods) and monitoring (regular checks/reports) in order to protect the trees in question. All of these measures support and uphold Policy *Env 12 & 6. Therefore,* we believe that using these policies to refuse our application is unfounded.
D. Our client is aware that a small part of the proposed extension would be under the canopy of a mature tree but is happy with this and does not have any concerns. The trees surrounding the site have been noted as healthy and as such stable. If the trees were to become diseased/rotten this would be picked up by the monitoring process suggested and would be dealt with as per the aborculturist's advice and in line with policy Env 12 and 6. Our client notes that the small risk for them from the existing healthy trees is far outweighed by the benefits that the extension would bring to their family and note that multigenerational living should be being encouraged due to the housing and care crisis in Scotland.
E. We note that there have been several construction projects in the Edinburgh City Council Conservation area, with trees in closer proximity to a new build than we have proposed that have been approved and therefore the refusal of our application is a contradiction of similar previously approved projects. Please see below for your information:

- 13/03899/FUL Application Granted for the Demolition of existing workshop, garage and conservatory and formation of a 2 storey side extension. (Fig 1)

- 14/02800/FUL Application Granted to Demolish existing garage and erect new side extension. (Fig 2.)

Allan Corfield Architects
The Self Build Experts

We note that neither of these proposal had tree surveys submitted online that we can see. Neither of these proposals show trees on their drawings or any reference to their proximity to mature trees, however in reality there are large trees next to both, please see photos below (Fig 1 left, Fig 2 right):

How is it that these proposals were approved and ours proposal has been refused? The conditions are similar if not worse? We believe this demonstrates clearly that the decision notice we have been given contradicts those that have been approved before.

Conclusion:

-We have demonstrated diligence to produce accurate and honest work, noting all the relevant information required.

-We believe that the policy used to refuse our application is irrelevant. We have provided evidence of how we plan to satisfy the policy that has been used to refuse our application. Furthermore, we willingly offered to have conditions attached to any approval to ensure the steps suggested by our Aborculturalist are carried out & any work complies with the aforementioned policy's.

-We believe that the expertise and guidance/documentation provided by our consultant Aborculturalist has not been given proper consideration. This was further compounded by the lack of any further communication following our final email containing good practice guides for construction in close proximity to trees, which we believe gave a wealth of information on approved methods of protecting trees in similar and far more complex scenarios than this proposal.

-There is precedent to evidence that similar projects in ECC conservation area have recently been approved.

We hope that this document provides all the necessary information for you to overturn the refusal decision for this application. However, should you require any further information or have any questions, please do not hesitate to contact us, we would be more than happy to assist you.

Kind Regards,

Sarah Packham
Architect

t 01383 737101 e info@acarchitects.biz w www.acarchitects.biz

Allan Corfield Architects Ltd, Lewis House, Unit 213, East Way, Hillend Industrial Estate, Hillend, Dunfermline. FIFE. KY11 9JF Registered in Scotland No. SC378399

AVArboriculture

Arboricultural Survey

To British Standard 5837 (2012)

Client: Ian Wales
Location: 14 Albert Terrace, Edinburgh EH10 5EA

Date of Survey: 29th April 2019

Survey Location:

14 Albert Terrace
Edinburgh
EH10 5EA

Survey commissioned by:

Allan Corfield Architects Ltd
Lewis House
Unit 213 East Way
Dunfermline
KY11 9JF

On behalf of:

Ian Wales
14 Albert Terrace
Edinburgh
EH10 5EA

Prepared by:

Mike Charkow MA, Cert Arb L4 (ABC), PTI
Arbor Vitae Arboriculture Ltd
2/3 Keir Street
Edinburgh
EH3 9EU

Mobile: 07917335066
Web: www.avtree.co.uk

Signed: 

Date: 30th April 2019

Michael J Charkow

Contents

1 Client Brief and Overview

1.1 Mike Charkow of Arbor Vitae Arboriculture Ltd was instructed by Allan Corfield Architects on behalf of the owner Ian Wales to carry out an arboricultural survey of three trees at and adjacent to 14 Albert Terrace, Edinburgh EH10 5EA.

1.2 Development plans were seen by the author.

1.3 The trees are within Merchiston and Greenhill conservation area. Consent may need to be sought from the local authority prior to carrying out any tree works (Town and Country Planning Act (Scotland) 1997) unless there are planning conditions that supersede this. This report may be used as evidence when making an application. No tree preservation orders relate to this site.

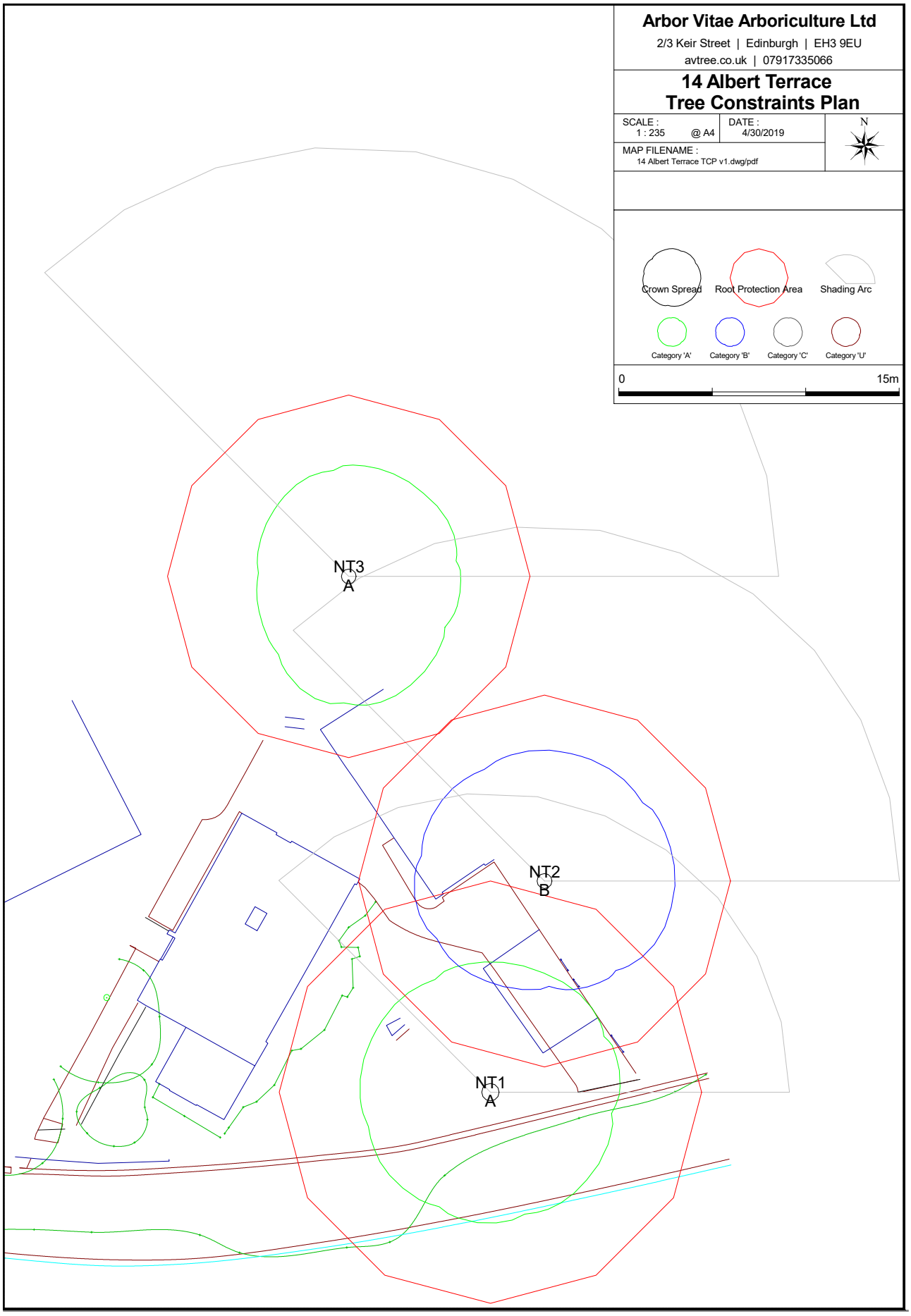
1.4 The survey was carried out on the 29th April 2019. Conditions were bright, dry and calm.

1.5 The tree survey is a tree management and building design tool which aims to survey the trees in their current context. The aims of the tree survey are:

- to categorise the trees as to their suitability for retention in terms of their quality and value. Quality is based on the tree's condition, and importance in terms of cultural, species, aesthetic or ecological significance.

- to minimise unnecessary impact to the retained tree population and demonstrate the constraints and opportunities available in the positioning of building and other work activity.

2 Tree Constraints Plan



3 Survey Findings

3.1 3 individual trees were surveyed.

3.2 2 categorised as ‘A’; 1 was categorised as ‘B’. See appendix 8 for retention category definitions.

3.3 Trees NT2 and NT3 were growing in a neighbouring property to the northwest.

3.4 The root protection areas (RPAs) of the trees are shown as circles, however the actual root spread may be quite different. There are several potential root barriers present such as boundary walls, hard surfacing, a concrete plinth (beneath the garage), a pavement and a road. The actual root spread may need to be determined using specialist equipment.

3.5 The proposed extension will occupy the area of the existing garage and will extend three meters towards the south east boundary wall gate and two metres towards the north west boundary wall (see appendix 12).

3.6 Should the garage’s concrete foundation plinth be utilised, any roots beneath this should not be effected.

3.7 Around 3% (12/383 square metres) of the RPA of NT1 may be conflicted by the proposed development.

3.8 Around 7% (21/297 square metres) of the RPA of NT2 may be conflicted by the proposed development.

3.9 Special engineering techniques do exist to that allow development to take place within a tree’s RPA with minimal impact to the trees. These include special foundation techniques such as piling, pads and cantilevering. For lightweight structures, it may also be possible to use a three-dimensional load-spreading geotextile.

3.10 For tree roots to survive they require uncompacted soil that has access to air and water. Considering this, the best solution would be to build above ground level, so there is an air gap. It may also be necessary to direct rainwater beneath the new extension.

3.11 See appendix 11 for the full tree survey schedule. See appendix 14 for the prioritised work schedule.

Appendix 1: **Bibliography**

British Standards Institute (2010), *BS 3998 'Recommendations for Tree Work'*, BSI, London.

British Standards Institute (2012), *BS 5837 'Trees in Relation to Design, Demolition and Construction - Recommendations'*, BSI, London.

Forbes-Laird, J. (2006), *THREATS: Tree Hazard Rating, Evaluation System*, Julian Forbes-Laird, Bedford.

Hirons, A. & Sjoman, H., *Tree Species Selection for Green Infrastructure: A Guide for Specifiers*, Issue 1.3/2019, Trees and Design Action Group

Johnson, O. & More, D. (2004), *Tree Guide*, Collins, London.

Lonsdale, D. (ed.) (2013), *Ancient and other veteran trees: further guidance on management*, The Tree Council, London.

Lonsdale, D. (1999), *Principles of Tree Hazard Assessment and Management*, TSO, London, UK.

Mattheck, C. & Breloer, H. (1994), *The Body Language of Trees*, TSO, London, UK.

Mattheck, C., Bethge, K. & Weber, K. (2015), *The Body Language of Trees: Encyclopedia of Visual Tree Assessment*, Karlsruhe Institute of Technology, Karlsruhe

Mitchell, A (1974), *A Field Guide to Trees of Britain and Northern Europe*, William Collins Sons & Co, Glasgow.

National House Building Council, *Building Near Trees*, NHBC Standards, September 1999, chapter 4.2.

National Joint Utilities Group, *NJUG* Guidelines *for the planning, installation and maintenance of utility apparatus in proximity to trees*, Volume 4, Issue 2, November 2007.

The National Tree Safety Group (NTSG), *Common sense risk management of trees*, Forestry Commission (December 2011).

Roberts, J., Jackson, N. & Smith, M. (2006), *Tree Roots in the Built Environment*, TSO, London.

Slater, D. *The structure and risk of junctions in trees*, at The Arboricultural Associations' 46th Annual Amenity Arboriculture Conference, (4th September 2012), Reading.

Strouts, R.G. & Winter, T.G. (1994), *Diagnosis of Ill-Health in Trees*, TSO, London, UK.

Legislation

Countryside Rights of Way Act (2000).

Nature Conservation (Scotland) Act (2004).

Town and Country Planning Act (Scotland) (1997).

Appendix 2: **The Author's Qualifications and Experience**

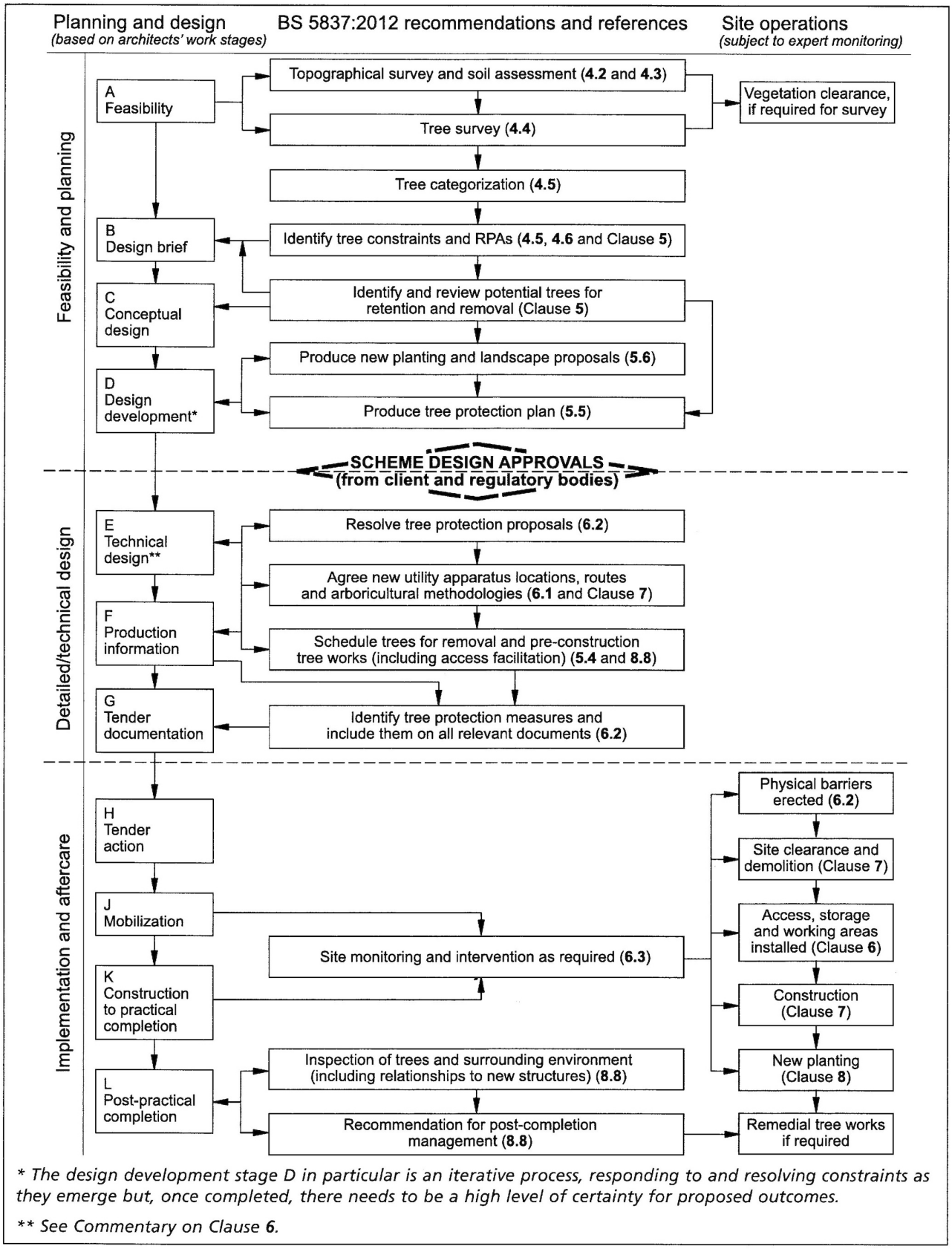
Mike Charkow holds the Level 4 Certificate in Arboriculture, and also the LANTRA Professional Tree Inspection Certificate. He has been working in the industry since 2004 as both a contracting and consulting arborist.

As part of a continual professional development program, Mike regularly attends professional seminars, conferences, training days and meetings.

He has been accredited by 'Echoes Ecology Ltd' as a competent person to inspect trees for bats and their roosts.

He is a member of the Arboricultural Association and the Consulting Arborist Society.

Appendix 3: **BS5837 Figure 1: Trees in the Planning Process**



** The design development stage D in particular is an iterative process, responding to and resolving constraints as they emerge but, once completed, there needs to be a high level of certainty for proposed outcomes.*

*** See Commentary on Clause **6**.*

Appendix 4: **Tree Survey Methodology**

A4.1 The criteria for selecting trees for surveying are specified in BS5837 (2012), i.e. they: have a minimum diameter of 75mm at 1.5m above ground level; have part of their crown extending into the site; or their root protection area extends into the site. Only trees plotted on the supplied topographical survey were surveyed.

A4.2 Only information relevant to the development plans have been recorded, i.e.:

- Trees within the area marked for a tree survey (i.e. the proposed extent of development) have been located and the following details recorded: species, height, diameter, condition, observations, bat habitat potential, retention category, work recommendations, crown spreads.

- Trees outwith the tree survey area but with root protection areas or crown spreads falling within the area have been located and tagged if possible. The same details have been recorded, with the addition of relevant crown dimensions.

A4.3 A topographical drawing with trees plotted was supplied.

A4.4 No identification tags were attached to the trees.

A4.5 A 'Haglof' electronic clinometer was used for measuring tree heights to within 0.5 metres. A diameter tape was used to measure tree diameters to within 10 millimetres.

A4.6 The tree genus and species have been recorded using their common English name and botanical name.

A4.7 Recommendations for management of the trees refer mainly to follow-up inspections and tree surgery for remedial work, or for the removal of hazardous trees. These works are recommended where there is a perceived hazard to people or property in the tree's predicted context of a proposed development (see BS5837:2012, clause 4.4.2.1). Any works will require a detailed work specification: this is out-with the scope of this report.

A4.8 Some retained trees may require facilitative pruning of branches prior to development work. This pruning work protects trees from possible damage caused by contact with machinery during construction. This work can only be specified once the development has been approved and final plans drafted. A suitably qualified arboriculturist should be approached for recommendations for facilitative pruning before the development site is worked on.

A4.9 Trees were inspected - where possible - using the Visual Tree Assessment method (VTA) as developed by Claus Mattheck and Helge Breloer (1994). This is a widely accepted methodology that takes into account structural and physiological symptoms from which judgements can be made regarding the risk from the tree.

A4.10 The root protection area (RPA) was calculated in accordance with BS5837 (2012). RPAs and root protection radii (RPR) for retained trees are listed in appendix 12.

A4.11 **Tree condition criteria** are based approximately on the following requirements:

Good = Full healthy canopy. Free from major cavities, wounds, pests or diseases.
Moderate = Slightly reduced leaf cover, minor deadwood or isolated major deadwood. Early stages of decay/disease. Structural faults.
Poor = Overall sparse leafing or extensive deadwood. Well established decay organisms. Structurally unsound cavities and or large wounds. Structural features prone to failure.
Very Poor = Large areas of dead crown. Advanced decay. Structurally unsound.

A4.12 Target-Ratings for Trees (Adapted from Forbes-Laird (2006), Table 5).

Value	Static target examples	Target occupancy examples
Very high (VH)	Building 24 hour use, railway	Constant vehicular traffic/busy playground
High (H)	Building 12 hour use, ≥11Kv power lines	Frequent vehicular traffic/constant pedestrian use
Medium (M)	Building/structure occasional use, <11Kv lines	Peak times traffic/intermittent use, eg commuter run
Low (L)	Garage, Summer house, Listed wall	Occasional traffic/sporadic use, eg slow country road
Very low (VL)	Unlisted wall, paving, garden features	Infrequently used access/public right of way/bridleway
None (N)	Grass	Hardly ever used, eg remote path

Appendix 5: **Caveats and Limitations**

A5.1 This survey was conducted according to the VTA type 1 method (Mattheck & Breloer, 1994; Mattheck 2007) meaning survey work was carried out from ground level only.

A5.2 No soil, foliage, wood, fungus or root samples were taken for analysis. Should any further investigation be required, this will be highlighted in the report.

A5.3 No internal decay measurements were taken. Should any further investigation be required, this will be highlighted in the report.

A5.4 Even apparently healthy, structurally sound trees can be adversely affected by extreme climatic conditions. Trees should be reinspected after such events.

A5.5 Trees are living organisms and can decline in health rapidly due to biotic and abiotic influences. Therefore, due to the unpredictability of nature, the unforeseen failure of intact trees can never be ruled out. The findings of this report are based on observations made at one visit, and best judgement has been made to ensure that any remedial work has been recommended; however no guarantee can be given as to the safety of any individual tree. For this reason, findings and recommendations in this report are valid only for a period of 12 months from the survey date, or until any extreme weather event, whichever is soonest.

A5.6 Only visible pathogens were recorded at the time of the survey. This does not confirm the absence of other pathogens but merely states that no annual fruiting bodies or other indications were observed at the time of the survey.

A5.7 A Type 1 VTA cannot eliminate the possibility that any of the trees are used as a habitat for protected flora and fauna (e.g. bat roost). Reference to the legal documents ‘Countryside Rights of Way Act’ (2000) and ‘Nature Conservation Act’ (2004) (Scotland) is advised. The trees have been assessed for potential bat habitat, as well as bird nesting. Due to the difficulty of assessing the upper stems and crowns of larger trees from the ground (especially evergreen trees), some habitat features may not have been observed.

A5.8 British Standard 5837 (2012) is not a specification document; as such it is acknowledged that deviance from the recommendations is permitted, so long as it is justified (British Standards Institute 2012, p.iii).

A5.9 Due to physical constraints inherent on the site, some measurements have been estimated.

Appendix 6: **Tree Management Proposal**

A6.1 The tree management proposals within this document should be carried out and the timescales for prioritised works respected.

A6.2 All recommended arboricultural remedial work should be completed to the standards defined in BS3998 (2010) 'Recommendations for Tree Work', and be carried out by professional arborists with the relevant qualifications and insurance.

A6.3 Standing deadwood is often created or maintained due to its habitat value. However, the deteriorating structural condition of dead trees is often impractical to monitor. Consequently, standing deadwood should not be retained if it is within falling distance of significant targets.

A6.4 A qualified ecological worker should be consulted prior to any tree work in order to advise on the likely impact of tree work on any protected flora and fauna.

A6.5 Trees that are potential bat habitats must be inspected by a suitably qualified person no more than 24 hours prior to tree surgery (April-September) or 48 hours (October -March).

A6.6 Any proposed disturbance to trees containing bird nests should be carried out with mitigation, and only between October and February.

A6.7 During periods of extreme weather, especially high wind or gusts (i.e. Beaufort Scale 7, above 30 miles per hour), it is advisable to warn residents, visitors and other site users of the potential risks, given the failure rate of trees under such conditions.

Appendix 7: **Generic Arboricultural Method Statement**

A7.1 This is a non-specific arboricultural method statement only.

A7.2 Trees are at risk of harm on any development site, and measures must be taken to protect trees from such harm.

A7.3 The root protection area (RPA) is intended to protect the roots of retained trees from harm as a result of soil-compaction, changes of soil level, trenching, loss of gaseous exchange, chemical damage and fire. The root protection area should be enclosed using a scaffold framework fixed with vertical tubes at 3 metre intervals, and weld-mesh panels (e.g. 'Heras' fencing) secured with wire or scaffold clamps (see BS5837:2012 Figures 2 and 3). The root protection area is designed to exclude people, machinery, materials and equipment, and must not be entered or altered without first consulting an arboriculturist. Root protection areas for retained trees have been listed in appendix 12, and are shown on the tree constraints plan.

A7.4 Trees are easily damaged by fire. No fire should be allowed where it might damage any part of a tree.

A7.5 Tree roots are easily damaged by chemicals. No harmful materials (including cement) should be stored, mixed or dumped anywhere on a level above any root protection area, as spillages and run-off may be absorbed by tree roots.

A7.6 Any new service-runs within the root protection areas should be excavated using compressed air and an air-lance or, as per National Joint Utilities Group guidelines (NJUG vol. 4 (2), 2007) so as to avoid damage to tree roots.

A7.7 A properly accredited ecologist should be consulted before any tree operations are carried out, in order to assess the trees for protected species. It is a criminal offence to disturb any protected species.

A7.8 Aerial parts of a tree can be damaged by construction vehicles or cranes. This damage can be avoided by facilitative pruning: branches that are expected to come into contact with machinery or vehicles can be correctly pruned by a tree surgeon before any damage is caused. An arboriculturist should be consulted prior to work starting on site.

A7.9 All tree surgery operations are governed by the British Standard 3998, 2010: "Recommendations for Tree Works". Any contractor employed must comply with this standard to ensure the pruning work is as damage-limiting as possible.

Table 1 **Cascade chart for tree quality assessment**

Category and definition	Criteria (including subcategories where appropriate)			Identification on plan
Trees unsuitable for retention (see Note)				
Category U Those in such a condition that they cannot realistically be retained as living trees in the context of the current land use for longer than 10 years	• Trees that have a serious, irremediable, structural defect, such that their early loss is expected due to collapse, including those that will become unviable after removal of other category U trees (e.g. where, for whatever reason, the loss of companion shelter cannot be mitigated by pruning) • Trees that are dead or are showing signs of significant, immediate, and irreversible overall decline • Trees infected with pathogens of significance to the health and/or safety of other trees nearby, or very low quality trees suppressing adjacent trees of better quality *NOTE Category U trees can have existing or potential conservation value which it might be desirable to preserve; see **4.5.7**.*			Trees identified by tree number and coloured circle referring to retention category.
	1 Mainly arboricultural qualities	**2 Mainly landscape qualities**	**3 Mainly cultural values, including conservation**	
Trees to be considered for retention				
Category A **Trees of high quality** with an estimated remaining life expectancy of at least 40 years	Trees that are particularly good examples of their species, especially if rare or unusual; or those that are essential components of groups or formal or semi-formal arboricultural features (e.g. the dominant and/or principal trees within an avenue)	Trees, groups or woodlands of particular visual importance as arboricultural and/or landscape features	Trees, groups or woodlands of significant conservation, historical, commemorative or other value (e.g. veteran trees or wood-pasture)	**Colour** Dark Red **RGB Code** 127-000-000
Category B **Trees of moderate quality** with an estimated remaining life expectancy of at least 20 years	Trees that might be included in category A, but are downgraded because of impaired condition (e.g. presence of significant though remediable defects, including unsympathetic past management and storm damage), such that they are unlikely to be suitable for retention for beyond 40 years; or trees lacking the special quality necessary to merit the category A designation	Trees present in numbers, usually growing as groups or woodlands, such that they attract a higher collective rating than they might as individuals; or trees occurring as collectives but situated so as to make little visual contribution to the wider locality	Trees with material conservation or other cultural value	**Colour** Light Green **RGB Code** 000-255-000
Category C **Trees of low quality** with an estimated remaining life expectancy of at least 10 years, or young trees with a stem diameter below 150 mm	Unremarkable trees of very limited merit or such impaired condition that they do not qualify in higher categories	Trees present in groups or woodlands, but without this conferring on them significantly greater collective landscape value; and/or trees offering low or only temporary/transient landscape benefits	Trees with no material conservation or other cultural value	**Colour** Mid Blue **RGB Code** 000-000-255

Appendix 9: **Glossary of Arboricultural Terms**

Adaptive growth. In tree biomechanics, the process whereby the rate of wood formation in the cambial zone, as well as wood quality, responds to gravity and other forces acting on the cambium. This helps to maintain a uniform distribution of mechanical stress.
Adaptive roots. The adaptive growth of existing roots; or the production of new roots in response to damage, decay or altered mechanical loading.
Adventitious shoots. Shoots that develop other than from apical, axillary or dormant buds; see also ‘epicormic'.
Anchorage. The system whereby a tree is fixed within the soil, involving cohesion between roots and soil and the development of a branched system of roots which withstands wind and gravitational forces transmitted from the aerial parts of the tree.
Architecture. In a tree, a term describing the pattern of branching of the crown or root system.
Bacteria. Microscopic single-celled organisms, many species of which break down dead organic matter, and some of which cause diseases in other organisms.
Bark. A term usually applied to all the tissues of a woody plant lying outside the vascular cambium, thus including the phloem, cortex and periderm; occasionally applied only to the periderm or the phellem.
Bottle-butt. A broadening of the stem base and buttresses of a tree, in excess of normal and sometimes denoting a growth response to weakening in that region, especially due to decay by selective de-lignification.
Branch:

- **Primary.** A first order branch arising from a stem
- **Lateral.** A second order branch, subordinate to a primary branch or stem and bearing sub-lateral branches.
- **Sub-lateral.** A third order branch, subordinate to a lateral or primary branch, or stem and usually bearing only twigs.

Branch bark ridge. The raised arc of bark tissues that forms within the acute angle between a branch and its parent stem.
Branch collar. A visible swelling formed at the base of a branch whose diameter growth has been disproportionately slow compared to that of the parent stem; a term sometimes applied also to the pattern of growth of the cells of the parent stem around the branch base.
Brown-rot. A type of wood decay in which cellulose is degraded, while lignin is only modified.
Buckling. An irreversible deformation of a structure subjected to a bending load.
Buttress zone. The region at the base of a tree where the major lateral roots join the stem, with buttress-like formations on the upper side of the junctions.
Cambium. Layer of dividing cells producing xylem (woody) tissue internally and phloem (bark) tissue externally.
Canker. A persistent lesion formed by the death of bark and cambium due to colonisation by fungi or bacteria.
Crown clean. The removal of dead, crossing, weak, and damaged branches, where this will not damage or spoil the overall stability or appearance of the tree.
Compartmentalisation. The confinement of disease, decay or other disfunction within an anatomically discrete region of plant tissue, due to passive and/or active defences operating at the boundaries of the affected region.
Condition. An indication of the physiological vitality and/or structural stability of the tree.
Crown/Canopy. The main foliage bearing section of the tree.

Crown lifting. The removal of limbs and small branches to a specified height above ground level.
Crown thinning. The removal of a proportion of secondary branch growth throughout the crown to produce an even density of foliage around a well-balanced branch structure.
Crown reduction/shaping. A specified reduction in crown size whilst preserving, as far as possible, the optimal tree shape.
Deadwood. Branch or stem wood bearing no live tissues. Retention of deadwood provides valuable habitat for a wide range of species and seldom represents a threat to the health of the tree. Removal of deadwood can result in the ingress of decay to otherwise sound tissues and climbing operations to access deadwood can cause significant damage to a tree. Removal of deadwood is generally recommended only where it represents an unacceptable level of hazard. Deadwood sizes: small (<25mm), moderate (<50mm), major (>50mm); the deadwood may be up- or down-rated depending on its overall volume.
Defect. In relation to tree hazards, any feature of a tree which detracts from the uniform distribution of mechanical stress, or which makes the tree mechanically unsuited to its environment.
Dieback. The death of parts of a woody plant, starting at shoot-tips or root-tips.
Disease. A malfunction in or destruction of tissues within a living organism, usually excluding mechanical damage; in trees, usually caused by pathogenic micro-organisms.
Disfunction. In woody tissues, the loss of physiological function, especially water conduction, in sapwood.
Epicormic shoot. A shoot having developed from a dormant or adventitious bud and not having developed from a first year shoot.
Girdling root. A root that circles and constricts the stem or roots possibly causing death of phloem and/or cambial tissue.
Hazard beam. An upwardly curved part of a tree in which strong internal stresses may occur without being reduced by adaptive growth; prone to longitudinal splitting.
Heartwood/false-heartwood/ripewood. Sapwood that has become disfunctional as part of the natural ageing processes
Incipient failure. In woody tissues, a mechanical failure which results only in deformation or cracking, and not in the fall or detachment of the affected part.
Included bark. Bark of adjacent parts of a tree (usually forks, acutely joined branches or basal flutes) which is in face-to-face contact.
Internode. The part of a stem between two nodes; not to be confused with a length of stem which bear nodes but no branches.
Lever arm. A mechanical term denoting the length of the lever represented by a structure that is free to move at one end, such as a tree or an individual branch.
Lignin. The hard, cement-like constituent of wood cells; deposition of lignin within the matrix of cellulose microfibrils in the cell wall is termed lignification.
Loading. A mechanical term describing the force acting on a structure from a particular source; e.g. the weight of the structure itself or wind pressure.
Longitudinal. Along the length (of a stem, root or branch).
Minor (small) deadwood. Deadwood of a diameter less than 25mm and or unlikely to cause significant harm or damage upon impact with a target beneath the tree.
Occluding tissues. A general term for the roll of wood, cambium and bark that forms around a wound on a woody plant (cf. woundwood)
Occlusion. The process whereby a wound is progressively closed by the formation of new wood and bark around it.
Pathogen. A microorganism which causes disease in another organism.

Photosynthesis. The process whereby plants use light energy to split hydrogen from water molecules, and combine it with carbon dioxide to form the molecular building blocks for synthesising carbohydrates and other biochemical products.
Phototropism: The growth of a tree or branch towards the light. Phototropic branches can become exposed and therefore prone to breakage.
Pollarding: A pruning system in which the upper branches of a young tree are removed, promoting a dense head of foliage and branches. Historically this was done to keep young shoots above grazing level; now used to keep trees at a manageable level. Not to be confused with topping.
Reactive Growth/Reaction Wood. Production of woody tissue in response to altered mechanical loading; often in response to internal defect or decay and associated strength loss (cf. adaptive growth).
Removal of dead wood. Unless otherwise specified, this refers to the removal of all accessible dead, dying and diseased branch-wood and broken snags.
Re-spacing. Selective removal of trees from a group or woodland to provide space and resources for the development of retained trees.
Residual wall. The wall of non-decayed wood remaining following decay of internal stem, branch or root tissues.
Sapwood. Living xylem tissues
Shedding. In woody plants, the normal abscission, rotting off or sloughing of leaves, floral parts, twigs, fine roots and bark scales.
Sprouts. Adventitious shoot growth erupting from beneath the bark
Stem/s. The main supporting structure/s, from ground level up to the first major division into branches. The stem (or stems if two or more co-dominant stems are present) may extend to the uppermost part of the tree.
Stress (plant physiology): A condition under which one or more physiological functions are not operating within their optimum range, for example due to lack of water, inadequate nutrition or extremes of temperature.
Stress (mechanics): The application of a force to an object.
Structural roots. Roots, generally having a diameter greater than ten millimetres, and contributing significantly to the structural support and stability of the tree; also containing water conducting vessels.
Taper. In stems and branches, the degree of change in girth along a given length.
Targets. In tree risk assessment (with slight misuse of normal meaning) persons or property or other things of value which might be harmed by mechanical failure of the tree or by objects falling from it
Topping. In arboriculture, the removal of the crown of an older tree, or of a major proportion of it. This is not generally advised as it can allow decay into the upper parts of the tree. Not to be confused with pollarding.
Torsional stress. Mechanical stress applied by a twisting force.
Understorey. A layer of vegetation beneath the main canopy of woodland or forest or plants forming this
Wind exposure. The degree to which a tree or other object is exposed to wind, both in terms of duration and velocity.
Wind-throw. The blowing over of a tree at its roots.
Woundwood. Wood with a typical anatomical features, formed in the vicinity of a wound.

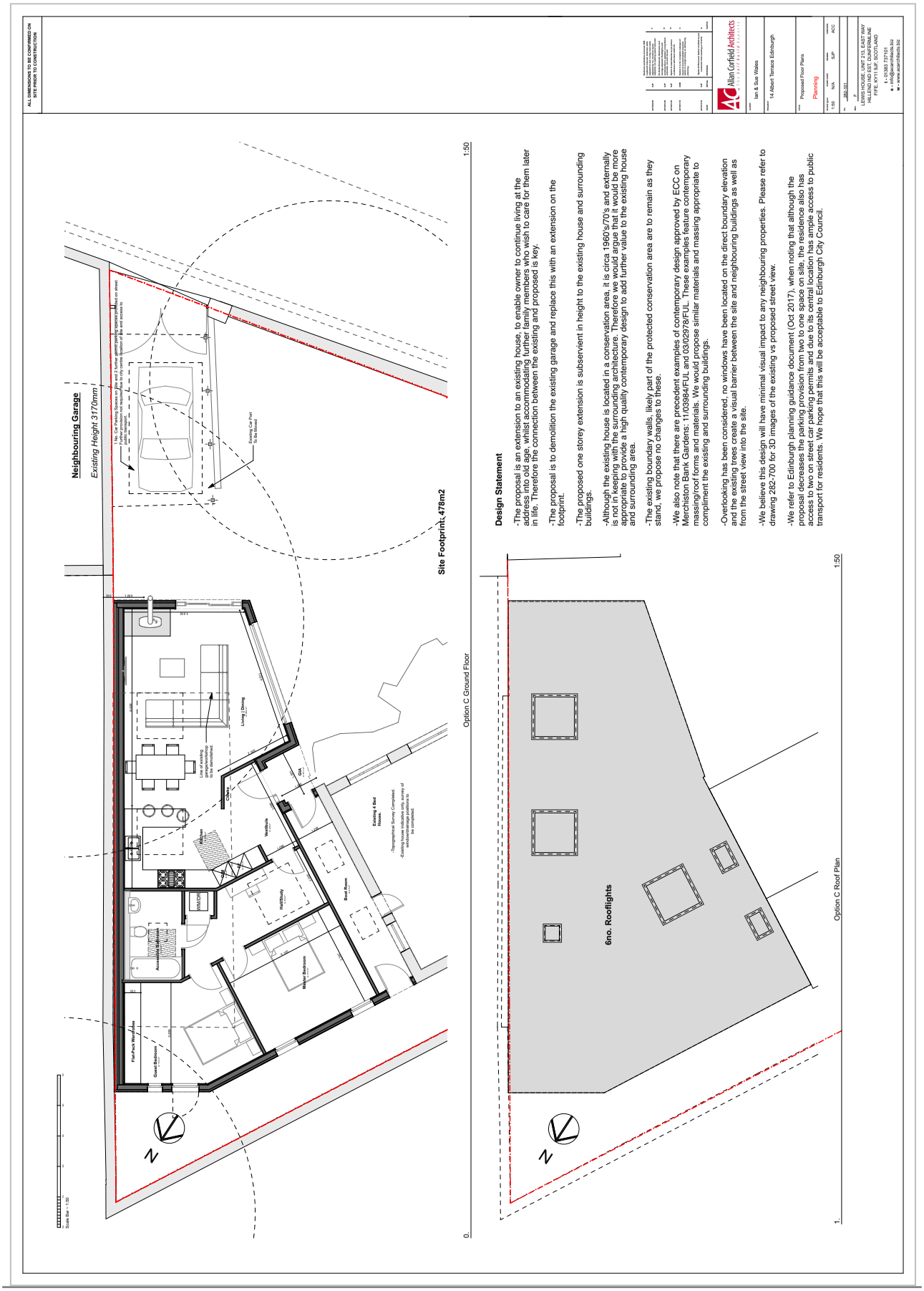
Appendix 10: **Key to the Tree Schedule**

Abbreviation	Explanation
TN	Tree Number: sequential number of the tree in order inspected.
Tag	Unique number on plastic tag attached to the tree. NT = no tag. Gx.y = Group (plus group number and number of the tree within the group).
Species	Tree species: Common English name (Botanical name)
H	Tree height: measured to nearest metre for trees over 10 m, or nearest 0.5 metres for trees up to 10 metres in height.
D	Stem diameter: measured at 1.5 metres above ground, to the nearest 10 millimetres. Trees with more than one stem are calculated as per BS5837:2012.
AC	Age Class: Young (up to the first 1/3rd of expected height), Semi-mature (1/3rd to 2/3rds of expected height), Mature (close to expected ultimate height with rapid girth expansion), Over-mature (a senescing tree), Veteran (a valued tree surviving beyond the typical age for the species), Dead.
V	Vigour (physiological condition) of the tree. N = normal F = fair P = poor D = dead
Condition	Observations, particularly of structural and/or physiological condition (e.g. the presence of decay, defects and pathological infections), as well as nuisances caused by the tree. **Good** = Full healthy canopy. Free from major cavities, wounds, pests or diseases. **Moderate** = Slightly reduced leaf cover, minor deadwood or isolated major deadwood. Early stages of decay/disease. Structural faults. **Poor** = Overall sparse leafing or extensive deadwood. Well established decay organisms. Structurally unsound cavities and or large wounds. Structural features prone to failure. **Very Poor** = Large areas of dead crown. Advanced decay. Structurally unsound.
Recommendations	Management recommendations for the tree.
U	Urgency of the recommended tree works (in months).
ERC	Estimated remaining contribution of the tree (in years).
RC	Retention Category, as per BS5837 (2012) Table 1.
S (+N/E/S/W)	Crown spread: lateral distance from the tree centre to the canopy extent at each cardinal point.
C (+N/E/S/W)	Crown height: distance from ground to the start of the canopy at each cardinal point.
Bat	Based on observations of possible bat roosting features - this does not indicate the actual presence of bats, rather the possibility of the tree being used by bats. H = high likelihood of roosting feature. L = low likelihood of roosting feature. U = unknown.
RI	Recommended maximum time until the next tree inspection (in months).

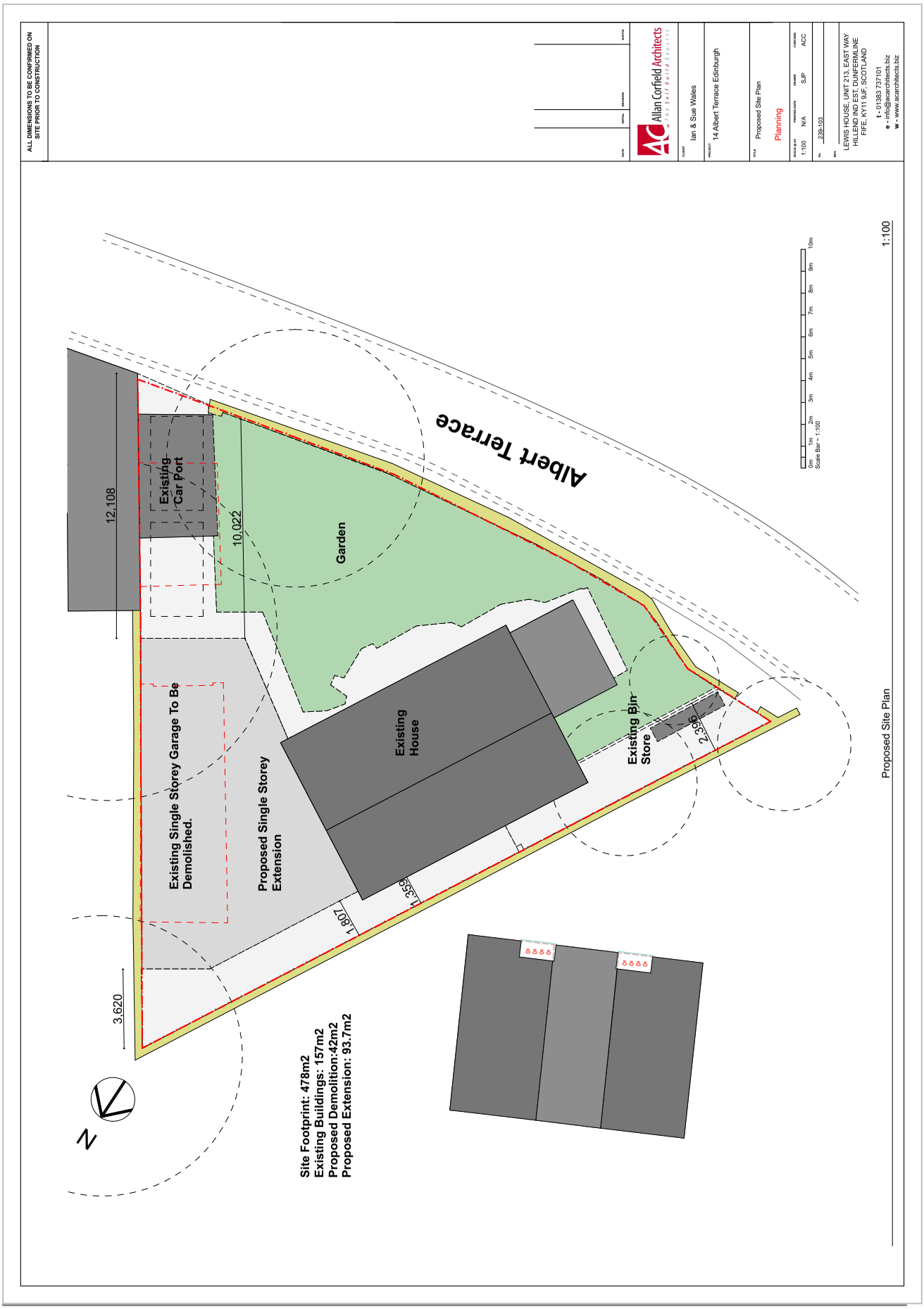
TN	Tag	Species	H	D	AC	V	Condition	Recommendations	U	ERC	RC	1B	SN	SE	SS	SW	CN	CE	CS	CW	Bat	RI	RPA	RPR
1	NT1	Common Horse Chestnut (Aesculus hippocastanum)	16	920	M	N	GOOD	NWR	-	>40	A	1W	7.0	7	7	7	4.0	4	3	4	L	36	383	11.0
2	NT2	Sycamore (Acer pseudoplatanus)	19	810	M	N	MODERATE Southern Inter-buttress basal decay with robust wound wood.	NWR	-	20-40	B	3NW	7.0	7	6	7	5.0	7	4	3	L	36	297	9.7
3	NT3	Common Lime (Tilia europaea)	23	790	M	N	GOOD	NWR	-	>40	A	6E	6.0	6	7	5	8.0	6	5	7	L	36	282	9.5

Appendix 12: **Architect's Drawings**

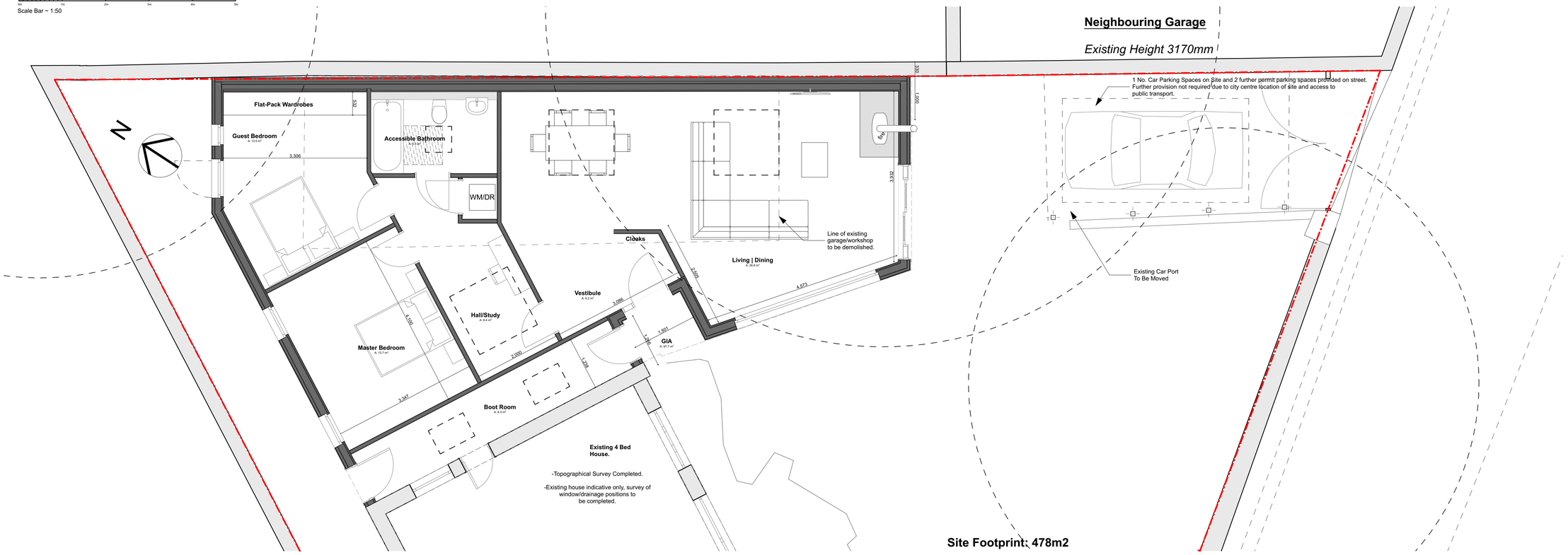
282-101 Proposed Floor Plans



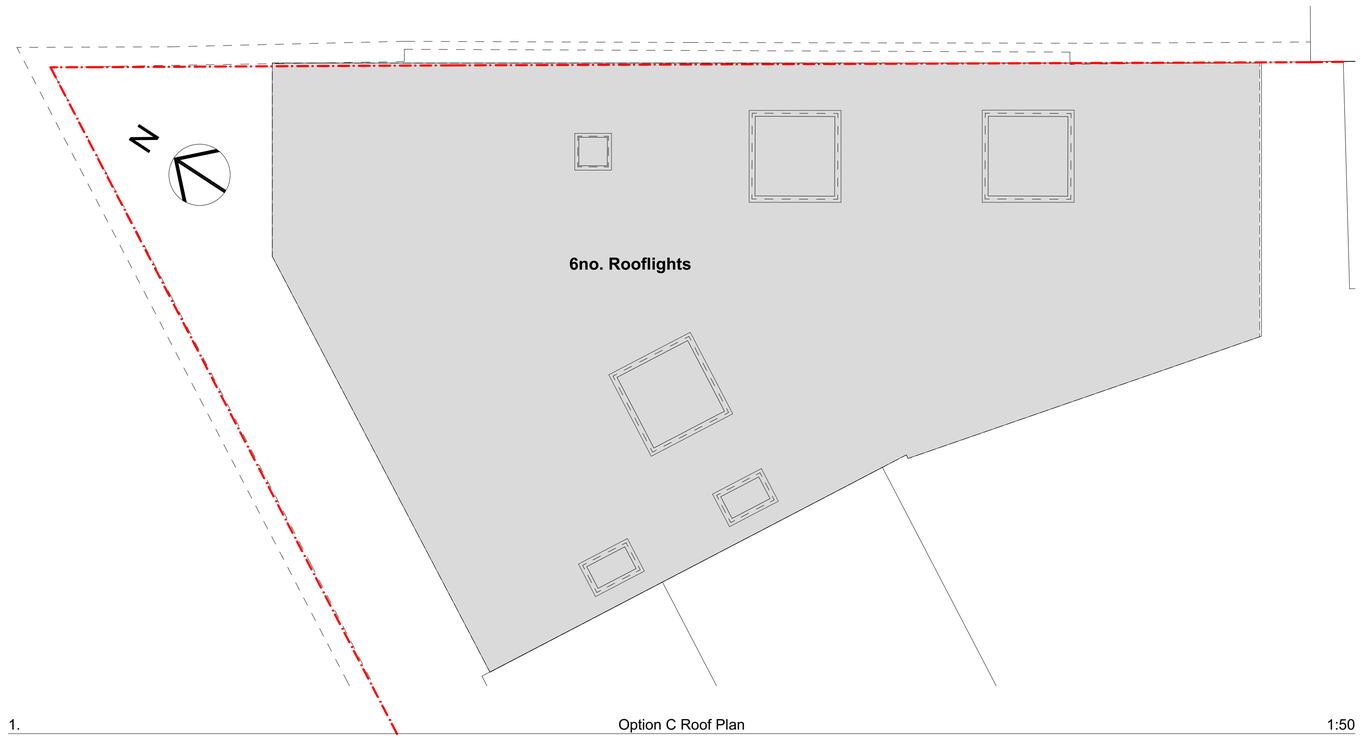
282-103 Proposed Site Plan



ALL DIMENSIONS TO BE CONFIRMED ON SITE PRIOR TO CONSTRUCTION



0. Option C Ground Floor 1:50



1. Option C Roof Plan 1:50

Design Statement

-The proposal is an extension to an existing house, to enable owner to continue living at the address into old age, whilst accommodating further family members who wish to care for them later in life. Therefore the connection between the existing and proposed is key.

-The proposal is to demolition the existing garage and replace this with an extension on the footprint.

-The proposed one storey extension is subservient in height to the existing house and surrounding buildings.

-Although the existing house is located in a conservation area, it is circa 1960's/70's and externally is not in keeping with the surrounding architecture. Therefore we would argue that it would be more appropriate to provide a high quality contemporary design to add further value to the existing house and surrounding area.

-The existing boundary walls, likely part of the protected conservation area are to remain as they stand, we propose no changes to these.

-We also note that there are precedent examples of contemporary design approved by ECC on Merchiston Bank Gardens: 11/03984/FUL and 03/02978/FUL. These examples feature contemporary massing/roof forms and materials. We would propose similar materials and massing appropriate to compliment the existing and surrounding buildings.

-Overlooking has been considered, no windows have been located on the direct boundary elevation and the existing trees create a visual barrier between the site and neighbouring buildings as well as from the street view into the site.

-We believe this design will have minimal visual impact to any neighbouring properties. Please refer to drawing 282-700 for 3D images of the existing vs proposed street view.

-We refer to Edinburgh planning guidance document (Oct 2017), when noting that although the proposal decreases the parking provision from two to one space on site, the residence also has access to two on street car parking permits and due to its central location has ample access to public transport for residents. We hope that this will be acceptable to Edinburgh City Council.

DATE	INITIAL	REVISION	SUFFIX
2019/05/20	SJP	Amendments to plan	G
2019/02/05	SJP	Bedroom wardrobes removed, WM cupboard reduced, bedroom walls adjusted to suit. Living room walls adjusted to suit. Cloaks walls adjusted, car parking space removed.	F
2019/01/29	SJP	En-Suite Removed, Bedrooms and storage adjusted. Rooflights and windows/doors updated. Living Room extended, car port moved.	E
2019/01/23	SJP	Option D amendments as per phone conference with client 23/01/19.	D
2019/01/16	CDM	Option C is for complete redesign of layout to accommodate required space in a single storey as advised by planning.	C
2018/12/10	SJP	Option B Removed, Option A edited as per comments from meeting on 5/12/18.	A

Allan Corfield Architects
The Self Build Experts

CLIENT
Ian & Sue Wales

PROJECT
14 Albert Terrace Edinburgh

TITLE
Proposed Floor Plans
Planning

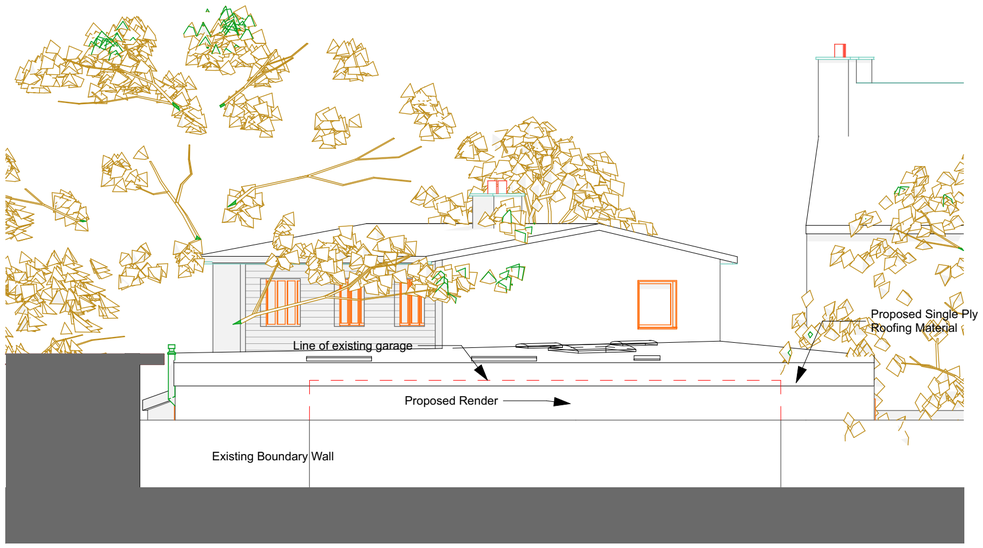
SCALE @ A3	START DATE	DRAWN	CHECKED
1:50	N/A	SJP	ACC

No. 282-101
REV. G

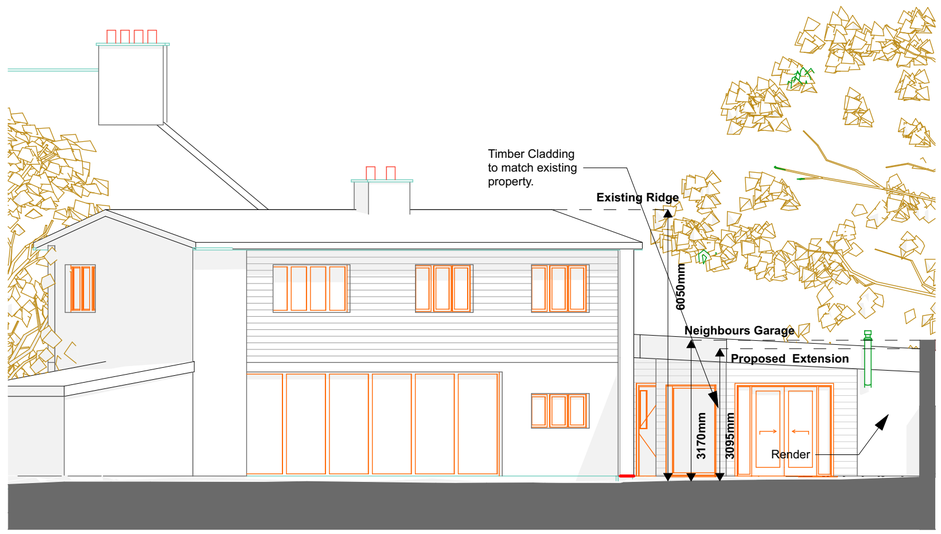
LEWIS HOUSE, UNIT 213, EAST WAY
HILLEND IND EST, DUNFERMLINE
FIFE, KY11 9JF, SCOTLAND

t - 01383 737101
e - info@acarchitects.biz
w - www.acarchitects.biz

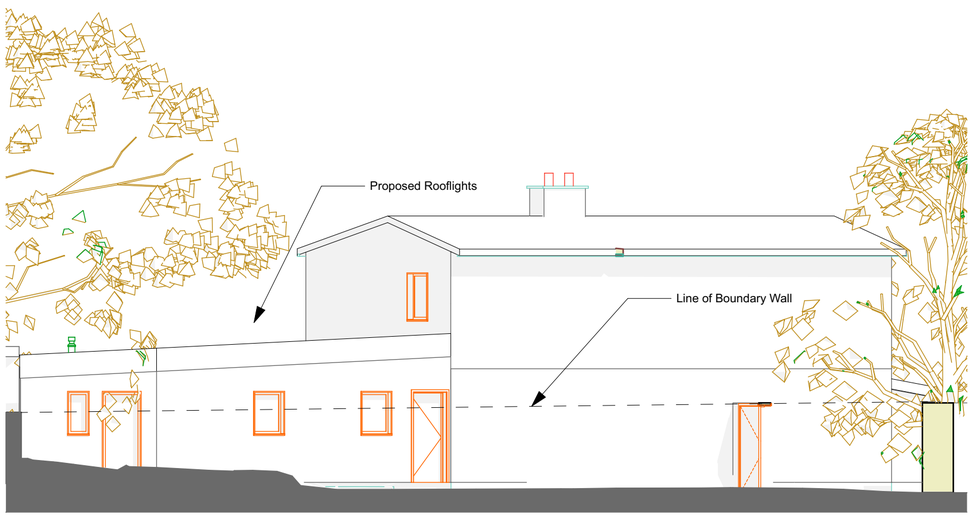
ALL DIMENSIONS TO BE CONFIRMED ON SITE PRIOR TO CONSTRUCTION



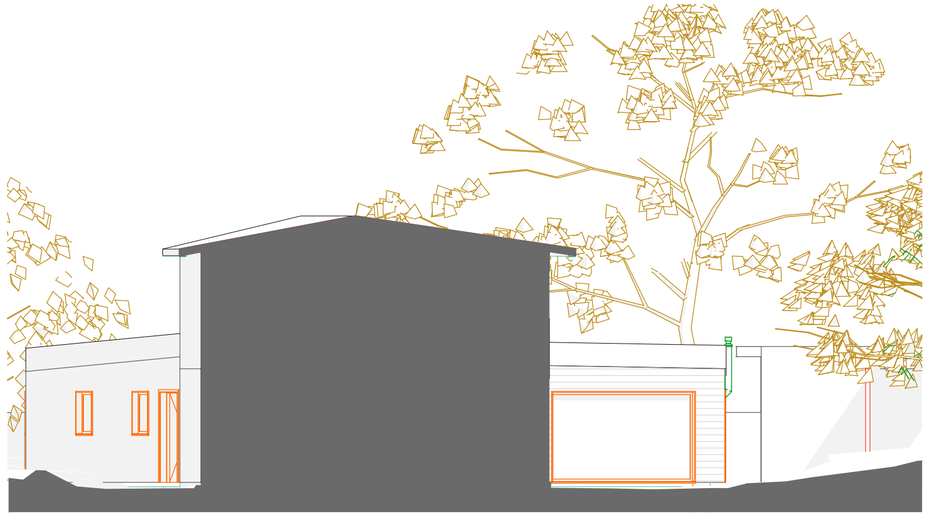
East Elevation 1:100



South Elevation 1:100



NorthElevation 1:100



West Elevation 1:100

0m 1m 2m 3m 4m 5m 6m 7m 8m 9m 10m
Scale Bar ~ 1:100

DATE	INITIAL	REVISION	SUFFIX
2019/02/05	SJP	Amendments as per email from client 04/02/19. Extension extended, windows moved to suit. Notes added regarding materials.	B
2019/01/31	SJP	Option A amendments as per phone conference with client 31/01/19. Extension extended, rooflights added.	A

Allan Corfield Architects
The Self Build Experts

CLIENT
Ian & Sue Wales

PROJECT
14 Albert Terrace Edinburgh

TITLE
Proposed Elevations

Planning

SCALE @ A3	PRINTED DATE	DRAWN	CHECKED
1:100	N/A	SJP	ACC

No. 282-102

REV. B

LEWIS HOUSE, UNIT 213, EAST WAY
HILLEND IND EST, DUNFERMLINE
FIFE, KY11 9JF, SCOTLAND

t - 01383 737101
e - info@acarchitects.biz
w - www.acarchitects.biz

ALL DIMENSIONS TO BE CONFIRMED ON SITE PRIOR TO CONSTRUCTION

N

3,620

12,108

Existing Single Storey Garage To Be Demolished.

Existing Car Port

Proposed Single Storey Extension

10,022

Site Footprint: 478m2
Existing Buildings: 157m2
Proposed Demolition:42m2
Proposed Extension: 93.7m2

1,807

Garden

1,359

Existing House

Albert Terrace

Existing Bin Store

2,396

0m 1m 2m 3m 4m 5m 6m 7m 8m 9m 10m
Scale Bar ~ 1:100

Proposed Site Plan 1:100

DATE	INITIAL	REVISION	SUFFIX

Allan Corfield Architects
The Self Build Experts

CLIENT
Ian & Sue Wales

PROJECT
14 Albert Terrace Edinburgh

TITLE
Proposed Site Plan

Planning

SCALE @ A3	PRINTED DATE	DRAWN	CHECKED
1:100	N/A	SJP	ACC

No. 239-103

REV.

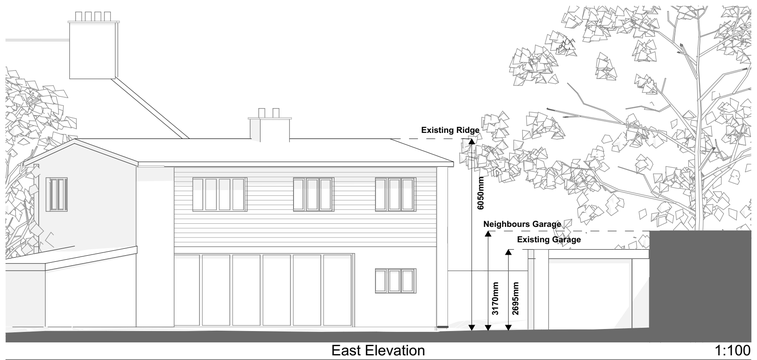
LEWIS HOUSE, UNIT 213, EAST WAY
HILLEND IND EST, DUNFERMLINE
FIFE, KY11 9JF, SCOTLAND

t - 01383 737101
e - info@acarchitects.biz
w - www.acarchitects.biz

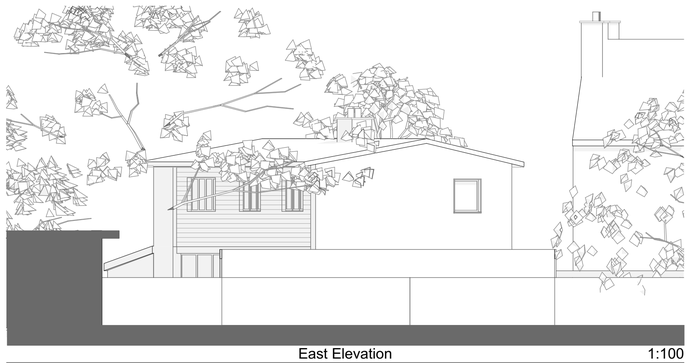
ALL DIMENSIONS TO BE CONFIRMED ON SITE PRIOR TO CONSTRUCTION

Existing Ground/Site Plan 1:100

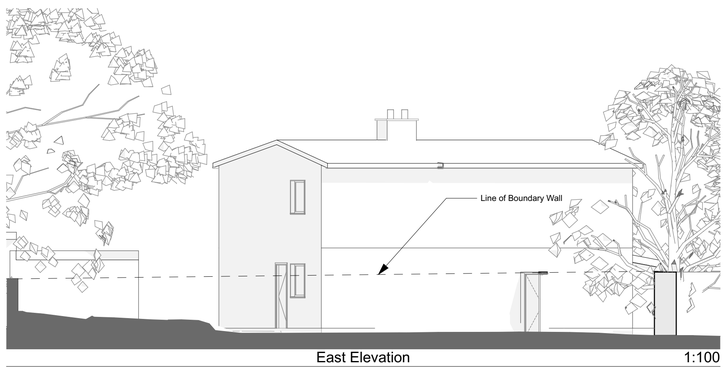
Existing Roof Plan 1:100



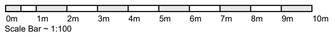
East Elevation 1:100



East Elevation 1:100



East Elevation 1:100



Scale Bar ~ 1:100

East Elevation 1:100

DATE	INITIAL	REVISION	SUFFIX

Allan Corfield Architects
The Self Build Experts

CLIENT
Ian & Sue Wales

PROJECT
14 Albert Terrace Edinburgh

TITLE
Existing Drawings

Planning

SCALE @ A3	START DATE	DRAWN	CHECKED
1:100	N/A	SJP	ACC

No. 282-104

REV.

LEWIS HOUSE, UNIT 213, EAST WAY
HILLEND IND EST, DUNFERMLINE
FIFE, KY11 9JF, SCOTLAND

t - 01383 737101
e - info@acarchitects.biz
w - www.acarchitects.biz

Contemporary design precedent on Merchiston Bank Gardens

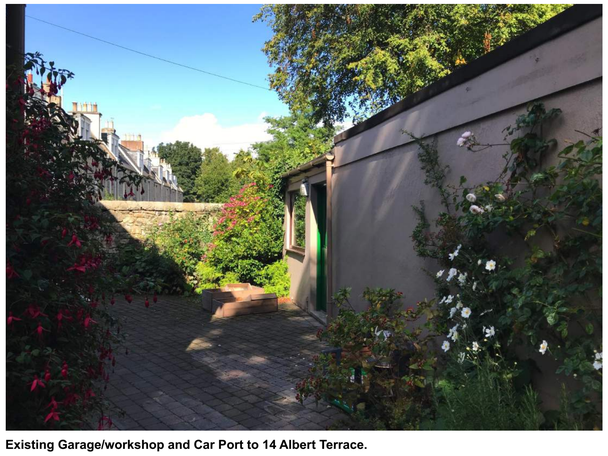
View from Merchiston Bank Gardens onto existing site on the corner of MBG and Albert Terrace.

View to existing property entrance on Albert Terrace.

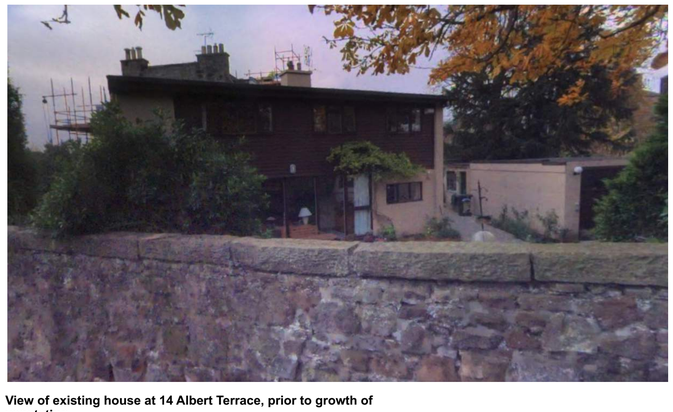
Street View of Gable of 14 Albert Terrace. The rear of the site mostly hidden by existing tree cover.

Street View of 14 Albert Terrace. Site mostly hidden by existing tree cover.

View of vehicular entrance to Albert Terrace. Site mostly hidden by existing tree cover.



Existing Garage/workshop and Car Port to 14 Albert Terrace.



View of existing house at 14 Albert Terrace, prior to growth of vegetation.

ALL DIMENSIONS TO BE CONFIRMED ON SITE PRIOR TO CONSTRUCTION

DATE	INITIAL	REVISION	SUFFIX

Allan Corfield Architects
The Self Build Experts

CLIENT
Ian & Sue Wales

PROJECT
14 Albert Terrace Edinburgh

TITLE
282-700 Contextual Images

Planning

SCALE @ A3	START DATE	DRAWN	CHECKED
	N/A	SJP	ACC

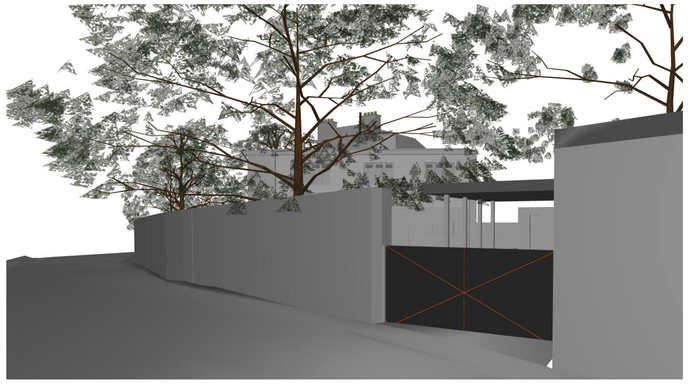
No. 282

REV. C

LEWIS HOUSE, UNIT 213, EAST WAY
HILLEND IND EST, DUNFERMLINE
FIFE, KY11 9JF, SCOTLAND

t - 01383 737101
e - info@acarchitects.biz
w - www.acarchitects.biz

ALL DIMENSIONS TO BE CONFIRMED ON SITE PRIOR TO CONSTRUCTION



Existing Street Views

Proposed Street Views

Existing Birds Eye View

Proposed Birds Eye View

DATE	INITIAL	REVISION	SUFFIX
2019/01/31	SJP	Option C amendments as per phone conference with client 23/01/19. Existing Car Gate added, Car port moved.	C
2019/01/23	SJP	Option B amendments as per phone conference with client 23/01/19.	B
2019/01/16	CDM	Option C is for complete redesign of layout to accommodated required space in a single storey as advised by planning.	A

Allan Corfield Architects
The Self Build Experts

CLIENT
Ian & Sue Wales

PROJECT
14 Albert Terrace Edinburgh

TITLE
3D Images

Planning

SCALE @ A3	START DATE	DRAWN	CHECKED
	N/A	SJP	ACC

No. 282-701

REV. C

LEWIS HOUSE, UNIT 213, EAST WAY
HILLEND IND EST, DUNFERMLINE
FIFE, KY11 9JF, SCOTLAND

t - 01383 737101
e - info@acarchitects.biz
w - www.acarchitects.biz

3D Visualisations

ALL DIMENSIONS TO BE CONFIRMED ON SITE PRIOR TO CONSTRUCTION

DATE	INITIAL	REVISION	SUFFIX

Allan Corfield Architects
The Self Build Experts

CLIENT
Ian & Sue Wales

PROJECT
14 Albert Terrace Edinburgh

TITLE
3D Visualisations

Planning

SCALE @ A3	START DATE	DRAWN	CHECKED
	N/A	SJP	ACC

No. 282-702

REV.

LEWIS HOUSE, UNIT 213, EAST WAY
HILLEND IND EST, DUNFERMLINE
FIFE, KY11 9JF, SCOTLAND

t - 01383 737101
e - info@acarchitects.biz
w - www.acarchitects.biz

Site Guidance Note 3: Ground protection

SGN 3: Summary guidance for site operatives

Administration

1. Unauthorised damage to protected trees is a criminal offence and could lead to enforcement action.
2. Work under the normal site risk assessment procedures and comply with the wider site safety rules.
3. Brief operatives entering root protection areas (RPAs) by the supervising arboriculturist before work starts.

Other relevant SGNs

4. Monitor works in RPAs by the supervising arboriculturist (See SGN 1 Monitoring tree protection).

Important reminders

5. Ground protection will be fit for purpose, i.e. prevent damage to the underlying soil and roots in RPAs.
6. Ground protection will be installed at the locations shown on the tree protection plan.
7. Ground protection locations will not be altered without prior approval of the supervising arboriculturist.
8. Where feasible, retain existing hard standing to act as ground protection.
9. Ground protection will not be removed at the end of construction without prior approval of the supervising arboriculturist.

SGN 3: Explanatory notes and examples

Purpose

SGN 3 describes where ground protection will be installed, what form it can take, and how long it should remain in place to effectively protect trees to be retained, based on the recommendations in BS 5837 (6.2 & 7.3).

General principles and clarifications

Ground protection is an effective means of preventing damage to the RPAs of retained trees during development activity. In practice, a range of approaches can be used, including retaining existing hard surfacing or structures that already protect the soil, installing new materials, or a combination of both. Whatever the chosen option, the result will be that the underlying soil (rooting environment) remains undisturbed and retains the capacity to support existing and new roots.

Ground protection will be installed at the locations shown on the tree protection plan and agreed by the local planning authority before any construction activity starts on site. It will remain in place until there is no risk of harm from the development activity. No ground protection will have its location changed or be removed without consulting the supervising arboriculturist. Furthermore, the condition of the ground protection will be regularly monitored to ensure it remains fit for purpose, i.e. sufficient to prevent damage to the RPAs of retained trees.

SGN 3: Explanatory notes and examples

SGN 3-01

Metal plates and heavy plywood cover this entire area while the piles are being installed and the building is constructed above the RPA.

SGN 3-02

Heavy-duty plywood set onto a compressible woodchip layer and pinned into position is suitable to spread the loading from pedestrian access.

SGN 3-03

ArborRaft is very effective for use on flat areas to spread load and reduce compaction in sensitive RPAs. Its main benefits over other cellular products are that there is no need to fill it with stone, which saves on stone purchase and haulage costs, and it is reusable. The UK supplier is Wrekin Products (www.wrekinproducts.com).

SGN 3: Explanatory notes and examples

Plywood fixed to a wood frame is another effective method of protecting soil from pedestrian compaction.


SGN 3-04

A scaffold framework attached to the main scaffold fencing can be used to support either scaffold planks or plywood to create an elevated platform with a gap beneath.


SGN 3-05

Cellular products are a very effective means of providing ground protection where heavy vehicle use is expected. Here, it is being used to temporarily widen an existing road, to be removed once the construction is finished.


SGN 3-06

SGN 3: Explanatory notes and examples

SGN 3-07

Custom designed sectional metal tracks can be joined to support very heavy traffic use through sensitive areas.

SGN 3-08

Ground protection must be used where repeated pedestrian traffic could cause compaction in sensitive RPAs. It can be as simple as plywood pinned to the ground, or custom designed plates that interlock to spread the load.

SGN 3-09

A combination of retaining existing surfacing and using temporary construction cabin accommodation can be a very effective means of preventing damage to sensitive areas.

SGN 3: Explanatory notes and examples

Steel plates can be an effective way of temporarily reinforcing weak surfacing over a construction access during the development activity.

SGN 3-10

A temporary concrete slab cast directly over existing low load bearing surfacing is an effective way of ensuring that the soil beneath is protected from compaction during development. This is removed once the heavy use is finished.

SGN 3-11

Temporary concrete slabs on slopes are an effective way of preventing soil damage during the transport of materials on and off site.

SGN 3-12

SGN 3: Explanatory notes and examples

Technical reference

Due to copyright restrictions, the relevant British Standard clauses are summarised, not quoted, as follows:

1. ***BS 5837 (2012) Trees in relation to design, demolition and construction – Recommendations:*** *Clauses 6.2 (Barriers and ground protection) and 7.3 (Tree protection during development) recommends:*
   - *6.2.1.1 All retained trees should be protected by fencing and ground protection before any demolition, development or soil stripping starts.*
   - *6.2.1.3 The protected area is sacrosanct. Fencing and ground protection should not be removed or altered unless agreed by the supervising arboriculturist.*
   - *6.2.1.5 The supervising arboriculturist should confirm that the tree protection has been installed as agreed before any significant site work starts.*
   - *6.2.3.1 Where deemed appropriate by the project arboriculturist, protective fencing can be set back and the RPA protected with ground protection. Where feasible, existing hard surfacing scheduled for removal should be retained to act as temporary ground protection during construction.*
   - *6.2.3.2 If the set-back exposes unmade ground, new temporary ground protection should be installed as part of the tree protection measures before site works start.*
   - *6.2.3.3 New temporary ground protection should support all anticipated loading and prevent compaction in the RPA.*
   - *6.2.3.4 The location and design of ground protection should be shown on the tree protection plan and detailed within the arboricultural method statement.*
   - *6.2.3.5 The objective of ground protection is to avoid soil compaction and prevent adverse impacts on tree root function.*
   - *7.3.2 Where structures are to be removed from RPAs, fencing and ground protection should be installed up to the edge of the structure to protect the underlying soil.*
   - *7.3.3 All demolition plant should either operate outside the RPA, or run on ground protection installed before demolition starts.*

Site Guidance Note 8: Removing surfacing and structures in root protection areas

SGN 8: Summary guidance for site operatives

Administration

1. Unauthorised damage to protected trees is a criminal offence and could lead to enforcement action.
2. Work under the normal site risk assessment procedures and comply with the wider site safety rules.
3. Brief operatives entering root protection areas (RPAs) by the supervising arboriculturist before work starts.

Other relevant SGNs

4. Monitor works in RPAs by the supervising arboriculturist (See SGN 1 Monitoring tree protection).
5. Design access to avoid soil compaction (See SGN 3 Ground protection).
6. Minimise excavation into original undisturbed soil (See SGN 7 Excavation in RPAs).

Important reminders

7. Manually break up and remove debris from the RPA using appropriate tools, e.g. pneumatic breaker, crow bar, sledgehammer, pick, mattock, shovel, spade, trowel, fork, and wheelbarrow. Have secateurs and a handsaw available to cut exposed roots to be removed.
8. Remove debris from the RPA without disturbing the adjacent rooting environment, e.g. lifting out with a machine located outside the RPA or manually carry out over ground protection.

SGN 8: Summary guidance for site operatives

9. Where appropriate, use machines with a long reach if they can work from outside RPAs, or from protected areas within RPAs without encroaching onto unprotected soil.

10. Where appropriate, leave below ground structures in place if their removal will cause excessive RPA disturbance.

SGN 8: Explanatory notes and examples

Purpose

SGN 8 describes the practical requirements for removing surfacing and structures in RPAs, based on the recommendations in BS 5837 (7.3).

General principles and clarifications

For the purposes of this guidance, the following broad definitions apply:

- **Surfacing:** Any hard surfacing used as a vehicular road, parking, or pedestrian path, including tarmac, solid stone, crushed stone, compacted aggregate, concrete, and timber decking. This does not include compacted soil with no hard covering.

- **Structures:** Any man-made structure above or below ground including service pipes, walls, gate piers, buildings, and foundations. Typically, this would include drainage structures, car-ports, bin stores, and concrete slabs supporting buildings.

In principle, roots frequently grow adjacent to and beneath existing surfacing and structures, so great care is needed during access and demolition. Damage can occur through physical disturbance of roots and/or the compaction of soil around them from the weight of machinery or repeated pedestrian passage. This is not generally a problem while surfacing and structures remain in place because they spread the load on the soil beneath and further protective measures are not normally necessary. However, once that protection is removed and the soil below is exposed, the potential for damage to roots becomes an issue. Careful consideration should be given to retaining structures and surfacing in place, if that will result in less disturbance to retained roots. For example, if a new wall needs to be constructed on the footprint of an existing wall, it might be better to retain the original footing and build on that, rather than remove it and install a new footing

In summary, there should be no vehicular or repeated pedestrian access unless existing ground protection is retained or new protective measures are installed. All exposed RPAs must be protected until there is no further risk of damage.

SGN 8: Explanatory notes and examples

Machines with a long reach can be used to lift out heavy surfacing and structures if the machine sits outside the RPA and the exposed surface is protected before there is any further access.


SGN 8-01

Careful lifting of cemented-in sets round this tree allowed them to be re-laid on a permeable sand base, improving the water input into the soil around the trunk.


SGN 8-02

These trees had impermeable surfacing right up to their trunks, which had to be removed by hand before installing new structures.


SGN 8-03

SGN 8: Explanatory notes and examples

This old concrete footing close to a large mature tree was retained, thus avoiding excessive disturbance of roots below it.

The RPAs for the retained trees around the boundary is protected by a combination of fencing and ground protection. The hard surfacing covering the remaining RPA was then removed using a pneumatic breaker before hand excavation of the soil beneath to install new footings.

If structures are firmly incorporated into roots, it may be best to leave them in place rather than attempt to remove them and irreversibly damage the tree.

SGN 8: Explanatory notes and examples

Technical reference

Due to copyright restrictions, the relevant British Standard clauses are summarised, not quoted, as follows:

1. ***BS 5837 (2012) Trees in relation to design, demolition and construction – Recommendations:***
   Clause 7.3 (Tree protection during demolition) recommends:
   - *7.3.2 RPAs up to the edge of structures to be removed should be protected.*
   - *7.3.3 Demolition plant should either operate outside the RPA or run on ground protection installed before work starts.*
   - *7.3.4 Demolition of buildings near retained trees should be done inwards within the footprint of the existing building.*
   - *7.3.5 Where possible, and after consultation with the supervising arboriculturist, it is preferable to leave redundant structures in RPAs to avoid damage to tree roots.*
   - *7.3.6 Existing surfacing should be removed with care and any machine should work backwards over the area to prevent damage to any exposed RPA. It is preferable to leave any existing sub-base in situ if new surfacing is to be laid.*

Site Guidance Note 9: Installing/upgrading surfacing in root protection areas

SGN 9: Summary guidance for site operatives

Administration

1. Unauthorised damage to protected trees is a criminal offence and could lead to enforcement action.
2. Work under the normal site risk assessment procedures and comply with the wider site safety rules.
3. Brief operatives entering root protection areas (RPAs) by the supervising arboriculturist before work starts.

Other relevant SGNs

4. Monitor works in RPAs by the supervising arboriculturist (See SGN 1 Monitoring tree protection).
5. Design access to avoid soil compaction (See SGN 3 Ground protection).
6. Follow the guidance in SGN 4 Pollution control, if concrete is poured within or near RPAs.
7. Minimise excavation into original undisturbed soil (See SGN 7 Excavation in RPAs).
8. Follow the guidance in SGN 8 Removing surfacing and structures in RPAs, if existing surfacing is to be removed before installing new surfacing.
9. Follow the guidance in SGN 10 Installing structures in RPAs, if the surfacing is to be installed on supports, i.e. piles, pads, or posts.

SGN 9: Summary guidance for site operatives

Important Reminders

10. For ground without existing surfacing, remove any loose material at the soil surface by hand and do not excavate into existing soil levels unless approved by the supervising arboriculturist.

11. For ground with a vegetation layer, excavations may be appropriate to remove the turf layer and surface vegetation, but this must be agreed by the supervising arboriculturist.

12. All new surfacing must be set back from trunks and buttress roots by at least 50 cm, unless otherwise agreed by the supervising arboriculturist.

13. Fill low points on undulating surfaces to an even level with any high points using an agreed granular material such as sand or stone.

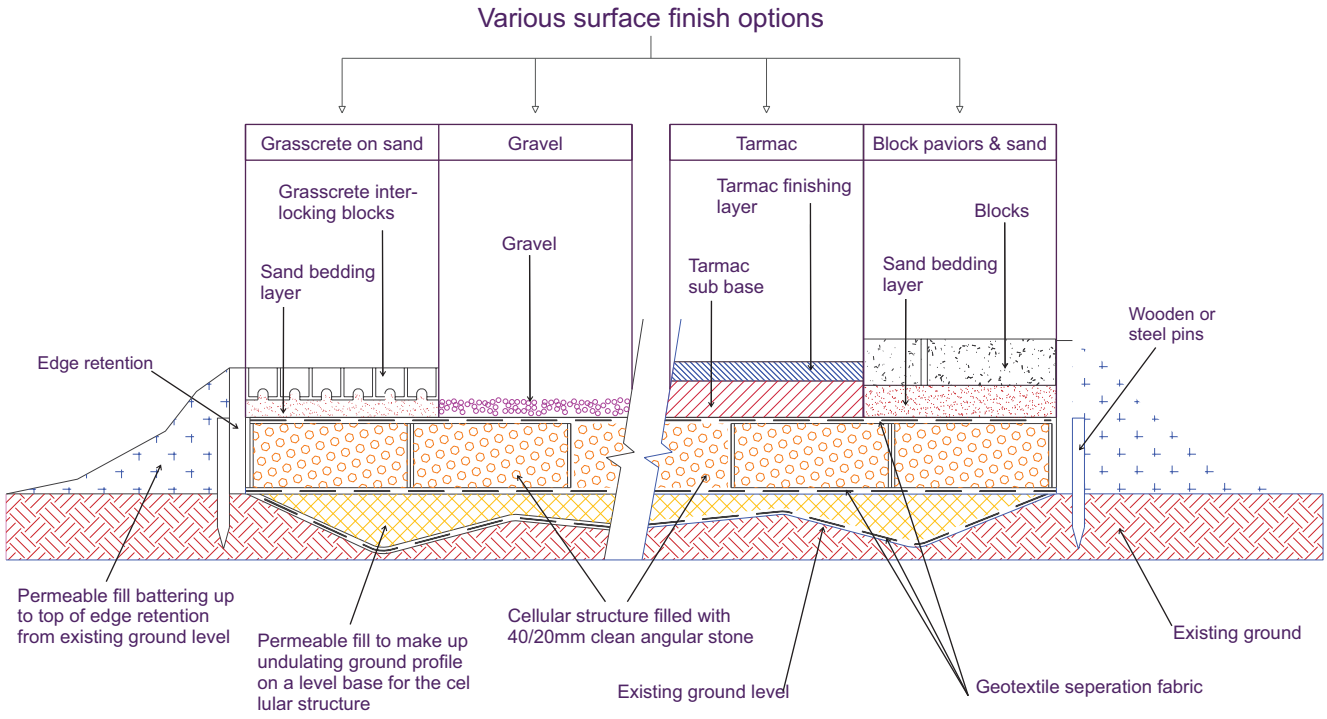
14. Do not mechanically compact new fill or existing soil.

15. If a three-dimensional cellular confinement system is used, install it according to the manufacturer's technical specification. Note: The cellular fill will be washed angular stone with no fines, as specified by the manufacturer.

SGN 9: Explanatory notes and examples

Purpose

SGN 9 describes the practical requirements for installing new surfacing and upgrading existing surfacing in RPAs, based on the recommendations in BS 5837 (7.4).



Illustrative specification for no-dig cellular confinement surfacing with examples of finishing options.
Note: The final design must be site specific and detailed by an appropriate specialist

BS 5837 recommends that three-dimensional cellular confinement systems are an appropriate sub-base for installing surfacing in RPAs. Most products are made from heavy-duty plastic that is pulled apart to open into cells. These are then filled with washed stone, after the product is spread over the ground and pinned in place. This forms a base layer that acts as a floating raft, spreading the load across the whole construction width. The base layer can be topped with a variety of finishes as illustrated in the cross-section.

Product suppliers: Protectaweb 3D cellular confinement product - https://wrekinproducts.com

SGN 9: Explanatory notes and examples

General principles and clarifications

Conventional surfacing installation based on excavating and compacting a supporting sub-base is unacceptable in RPAs because it can damage roots and the rooting environment. This harm is caused by killing roots, compacting soil structure, and impeding water/gaseous exchange through the soil. Adverse impact on trees will be reduced by minimising the extent of these changes in RPAs.

New surfacing solutions

Important elements of an effective design include protecting roots and the rooting environment during installation, a load spreading capability to prevent localised compaction, and providing adequate permeability for water and gasses to support living roots. The main approaches are:

- three-dimensional cellular confinement systems filled with washed stone laid directly onto the soil surface;
- concrete slabs cast directly onto the soil surface; and,
- surfacing supported above the soil surface on top of piles, pads, or posts.

The specific design of the chosen approach is an engineering issue that will take account of the bearing capacity of the soil, the intended loading, and the frequency of loading. The detail of product and specification are technical matters to be provided by an appropriate specialist.

Dealing with undulating surfaces and establishing a tolerable level of excavation

The precise location and depth of roots within the soil is unpredictable and will often only be known when careful digging starts on site. Ideally, all new surfacing in RPAs will be no-dig, i.e. requiring no excavation, but this can sometimes be difficult on undulating surfaces. New surfacing normally requires an evenly graded sub-base layer, which can be made up to any high points with granular, permeable fills such as crushed stone or sharp sand. This sub-base will not be compacted as would happen in conventional surface installation. Some limited excavation can be necessary to achieve this and need not be damaging if carried out carefully and large roots are not cut. Tree roots and grass roots rarely occupy the same soil volume at the top of the soil profile, so the removal of an established turf layer up to 5cm from the surface is unlikely to be damaging to trees. However, this may not be possible where there is no grass because tree roots may grow right up to the soil surface. In some situations, it may be possible to dig to a greater depth,

SGN 9: Explanatory notes and examples

depending on local conditions, but this will be assessed by the supervising arboriculturist if excavation deeper than 5cm is anticipated.

On undulating surfaces, finished gradients and levels will be planned with sufficient flexibility to allow on-site adjustment if excavation of any high points reveals large unexpected roots near the surface. If the roots are less than 2.5cm in diameter, they can be cut and the base for the surfacing formed with the preferred minimal excavation of up to 5cm. However, if roots over 2.5cm in diameter are exposed, cutting them may be too damaging and further excavation may not be possible. If that is the case, the surrounding levels will be adjusted to take account of these high points by filling with suitable material. If this is not practical, the situation will be discussed with the supervising arboriculturist before a final decision is made.

Edge retention

Conventional kerb edge retention set in concrete-filled excavated trenches can cause damage to roots and will be avoided. Edge retention in RPAs will be designed to avoid any significant excavation into existing soil levels, with several approaches that are fit for this purpose. For block paviours, the use of pre-formed edging secured by metal pins is effective and can be reinforced by concrete supports if there is no excavation into the soil. Railway sleepers pinned in place or wooden boards offer alternative options, depending on the expected loading of the surfacing. If the edge retention needs to be battered down to lower surrounding ground levels, a permeable soil fill will be used, as agreed with the supervising arboriculturist.

Footpaths and surfacing without a load-spreading base layer

In some situations, limited-width floating concrete rafts constructed directly onto the soil surface may be acceptable for both pedestrian and vehicular access, but the design will not include any strip-dug supports. If concrete is poured directly, precautions must be taken to ensure that no toxic fluids can contaminate the adjacent soil, e.g. confining the concrete in an impermeable liner. Alternatively, elevated paths supported on low impact frames or post supports allow a decking surface to cross sensitive areas. Where paths are installed very close to trunks, provision will be made for distortion from future root growth through using flexible components for the supporting frame and surfacing.

Specific considerations for upgrading existing surfacing

When upgrading existing surfacing, the preferred option will be to leave it in place and install the new surfacing on top of it. If the retained surfacing is impermeable, it may improve conditions for tree roots if it

SGN 9: Explanatory notes and examples

is punctured before the new surfacing is laid, but this is detail to be agreed with the supervising arboriculturist. If the existing surfacing is to be removed, it will be excavated down to the soil level beneath following the guidance set out in SGN 8 (Removing surfacing and structures in root protection areas). The new surfacing will then be installed on this surface, as described above.

New surfacing near trunks

All new surfacing should be set back from trunks and buttress roots by at least 50cm to allow space for future growth and minimise the risk of distortion.

The flat-packed three-dimensional cells are pulled apart, spread across the area to be surfaced, and pinned in place ready for the washed angular stone fill (with no fines).

SGN 9-01

The stone-filled cells spread the load of traffic to prevent localised compaction. The permeable geotextile membrane on the ground allows the movement of water and gasses, but prevents the migration of stone into the soil profile.

SGN 9-02

SGN 9: Explanatory notes and examples

SGN 9-03

Although BS 5837 recommends a minimum distance of 50cm between new surfacing and buttress roots, there may be scope for flexibility in this separation for mature trees with little potential for future growth, if agreed by the supervising arboriculturist.

SGN 9-04

A conventional concrete haunching can be used to retain new surfacing if it is not dug into a trench - here it is placed on top of the three-dimensional cellular confinement layer.

SGN 9-05

This preparation for a new residential access drive shows the base formation above the original ground level, with the permeable geotextile layer covering the ground. The wooden boards are pinned in place, creating an informal and rustic surface edging.

SGN 9: Explanatory notes and examples

The three-dimensional cells have been installed and filled with washed stone, ready for the finished surface to be laid above. The ground beyond the drive edges has been profiled with backfilled topsoil.


SGN 9-06

An alternative to the flexible three dimensional cells is rigid interlocking plastic cells, again filled with washed stone and retained by pinned wooden edges.


SGN 9-07

Another option for wooden edges at corner points that allows for vehicles to accidentally track over the edge of the formal surfacing.


SGN 9-08

SGN 9: Explanatory notes and examples

SGN 9-09

This temporary access for heavy construction traffic on the outer edge of a RPA is a concrete slab cast above ground level and will be removed when the project is completed. This approach is particularly suitable for slopes where a three-dimensional approach may be more prone to distortion when carrying heavy loads.

SGN 9-10

In some situations, it may be appropriate to cast a free-floating concrete surface directly onto the soil surface provided provision is made to prevent soil contamination while the concrete is being poured.

SGN 9-11

The RPA of this oak extended about 12m from its trunk and was previously covered in tarmac as parking. This original surfacing was removed and replaced with a new patio set above the ground level, with provision for water and air input into the covered RPA.

SGN 9: Explanatory notes and examples

Where new surfacing is to be installed over existing, sometimes it may assist the movement of gasses and water if the existing surfacing is punctured. In this situation, exploratory digging showed important roots directly beneath the existing tarmac, which would have been damaged if the tarmac was removed.


SGN 9-12

An option for installing surfacing close to mature trees is to use a light metal frame with rubberised surfacing to allow the path to distort without failing as the roots grow.


SGN 9-13

Board walks supported on posts or a light frame are another way of providing pedestrian access across sensitive RPAs (photo courtesy of Philip van Wassenaer).


SGN 9-14

SGN 9: Explanatory notes and examples


SGN 9-15

New surfacing such as decking can be supported above the ground on posts leaving the soil surface beneath undisturbed.


SGN 9-16

Although this is only a temporary surface, railway sleepers pinned into the ground can be used to retain the edges of new surfacing.


SGN 9-17

Where space is restricted it is possible to use metal edging.

SGN 9: Explanatory notes and examples

Technical reference

Due to copyright restrictions, the relevant British Standard clauses are summarised, not quoted, as follows:

1. ***BS 5837 (2012) Trees in relation to design, demolition and construction – Recommendations:***
   Clause 7.4 (Permanent hard surfacing within the RPA) recommends:
   - *7.4.2.1 New surface design should not require excavation other than the removal of the turf layer and surface vegetation. The design should be able to bear any anticipated loading, especially if it must carry construction traffic.*
   - *7.4.2.2 The design should evenly distribute the loading to avoid localised compaction.*
   - *7.4.2.7 The design should be resistant to or tolerant of deformation by tree roots, and should be set back from the stem and any root buttresses by a minimum of 50cm to allow for growth and movement. Levels can be made up using appropriate inert granular material.*
     ***NOTE** Piles, pads, elevated beams, and three-dimensional cellular confinement systems, can be used to support surfaces. If excavation is required, the location of roots greater than 2.5cm in diameter should be determined by exploratory investigations and retained if possible.*
   - *7.4.3 The conventional installation of kerbs, edgings, and haunchings, can damage tree roots and should be avoided either by using alternative methods of edge support or by not using supports at all.*
     ***NOTE** Examples of suitable edge supports include above-ground peg and board edging, sleepers, gabions, and other non-invasive ground-contact structures.*
   - *7.4.4.3 Ground levels should not be reduced to establish the new hard surface at the former ground level. Loose debris and turf should be removed carefully and the new surface should sit on top of the original soil.*
   - *7.4.4.4 Fill to raise levels should be a granular material which remains gas- and water-permeable throughout its design life.*
   - *7.4.4.5 Wet concrete should not be poured in the RPA unless an impermeable liner has been installed to prevent soil contamination from the toxic leachate.*

Site Guidance Note 10: Installing structures in root protection areas

SGN 10: Summary guidance for site operatives

Administration

1. Unauthorised damage to protected trees is a criminal offence and could lead to enforcement action.
2. Work under the normal site risk assessment procedures and comply with the wider site safety rules.
3. Brief operatives entering root protection areas (RPAs) by the supervising arboriculturist before work starts.

Other relevant SGNs

4. Monitor works in RPAs by the supervising arboriculturist (See SGN 1 Monitoring tree protection).
5. Design access to avoid soil compaction (See SGN 3 Ground protection).
6. Reduce the risk of chemical contamination from poured wet concrete (See SGN 4 Pollution control).
7. Minimise excavation into original undisturbed soil (See SGN 7 Excavation in RPAs).
8. Install any surfacing acting as support for light structures directly onto the soil surface with minimal excavation (See SGN 9 Installing/upgrading surfacing in RPAs).

SGN 10: Summary guidance for site operatives

Important Reminders

9. Hand-dig pile, pad, or post locations down to a depth of 60cm and, if necessary, adjust location to avoid cutting roots greater than 2.5cm diameter.

10. No excavation into existing soil levels except where authorised for supports. Note: This specifically applies to ground beams sitting above supports.

11. Make provision for ventilation and watering beneath substantial structures.

12. Where feasible, keep in place existing below ground structures where they can be reused to support new structures, e.g. new walls built on existing wall footings.

SGN 10: Explanatory notes and examples

Purpose

SGN 10 describes the practical requirements for installing new structures in RPAs, based on the recommendations in BS 5837 (7.5 & 7.6).

General principles and clarifications

Conventional installation of new structures using strip foundations is unacceptable in RPAs because the excavations can damage roots and adversely disturb the soil. Additionally, the covering created by the new structure over the soil can impede water and gaseous exchange. Adverse impact on trees will be reduced by minimising the extent of these changes in RPAs.

The installation of pile, pad, or post supports

Substantial structures such as heavy walls, garages, and larger buildings, will sit above ground level, supported by piles, pads, or posts, with provision for water and gaseous input into the covered area. The risk of harm through soil compaction during the construction activity will be reduced using ground protection as described in SGN 3 (Ground protection).

SGN 10: Explanatory notes and examples

The risk of chemical contamination will be reduced by following the guidance in SGN 4 (Pollution control). The risk of direct root damage from excavation will be reduced by following the guidance in SGN 7 (Excavation in root protection areas). All support locations will be hand-dug to a depth of 60cm to identify if any roots over 2.5cm diameter are in the way. Sufficient flexibility will be built into the design to allow support locations to be moved to avoid roots over 2.5cm diameter.

Additionally, the diameter and the distribution of the supports will be minimised to reduce the risks of disturbance during the installation. The bases of such structures will allow for air and water input beneath through ventilation and irrigation provision.

The installation of no-dig surfacing supports

An alternative for lighter structures such as small sheds, carports, and bin stores, is to support them on custom designed no-dig surfacing, installed directly onto the soil surface, as described in SGN 9 (Installing/upgrading surfacing in root protection areas).

Basements

It is also feasible to install subterranean structures (basements) beneath RPAs if the volume of soil forming the RPA can be retained without significant disturbance. The detailed design and specification of all these solutions is an engineering issue, to be informed and guided by tree expertise.

Support locations should be hand-dug to a depth of 60cm to see if there are any significant roots in the way, with provision to move the location if roots are found (note the pile in this example was finally installed to avoid the root).

SGN 10-01

SGN 10: Explanatory notes and examples

Ground protection should be used to spread the load of the piling rig once excavation has confirmed that no substantial roots are in the preferred pile location.

Piles can also be used to support bridges across sensitive RPAs, but the temporary ground protection must be removed before the main structure is either imported in or cast on site.

The RPA for the trees behind the fencing extends across the whole view. The soil surface is protected by heavy duty ground protection to prevent compaction during the work and the poured concrete piles were sleeved to prevent RPA contamination.

SGN 10: Explanatory notes and examples

This RPA was protected from compaction from the piling rig by a three-dimensional cellular covering. The cellular covering was cut away from the pile locations, which were then hand-dug down to 60cm to make sure that no roots over 2.5cm were damaged. The piles were a screw type to avoid soil contamination from poured concrete.


SGN 10-05

Small diameter piles (less than 15cm) are an effective means of supporting structures in RPAs with minimal disturbance. The wooden formwork provides the receptacle for the steel reinforcement and the poured concrete that will form the building slab.


SGN 10-06

Where the slabs for larger structures are cast on site, a biodegradable void-former can be used to temporarily support the weight of the liquid concrete until it sets. The void-former can then be wetted and washed away to leave a void, or left to degrade naturally, both of which allow movement of air beneath the slab.


SGN 10-07

SGN 10: Explanatory notes and examples

SGN 10-08

This garage was supported on piles with a concrete ground slab poured on site using a biodegradable void-former. Note the drainage downpipe feeding into a perforated watering pipe laid below the slab to provide water input into the RPA.

SGN 10-09

It is possible to support very large structures on piles within sensitive RPAs.

SGN 10-10

This building is supported on piles, with ground beams above onto which the floor is laid. The beams are above ground level and the pipes are perforated with a shingle surround to provide water input into the RPA once the structure is completed.

SGN 10: Explanatory notes and examples

These carports are formed by wooden posts above a three-dimensional cellular no-dig and load-spreading surface of permeable crushed stone.


SGN 10-11

The workman is standing within the outline of a free standing concrete slab that is to be installed above the existing ground level within an RPA that was previously covered in tarmac as parking.


SGN10-12

This raised deck extension is supported on wooden posts, hand dug to avoid significant roots.


SGN 10-13

SGN 10: Explanatory notes and examples

The original church wall was displaced towards the pavement and had to be removed for safety reasons. The replacement structure was built on a new concrete reinforced footing installed without cutting any significant roots.

This covered bin store was constructed within RPAs by placing block paving on a levelled sand base directly onto the existing ground level, with the posts in hand dug holes to support the roof.

This church extension was built on a concrete beam and block floor slab supported on piles located in hand dug holes. Ground protection around the margins protected the RPA of the adjacent tree during construction.

SGN 10: Explanatory notes and examples

Where significant roots cannot be cut, a bridging lintel of concrete or steel can be used to support the wall slightly above the roots to be retained.


SGN 10-17

Hand excavation of soil and shrub roots allows preformed steel or concrete lintels to be installed as a solid base for the curved wall construction, raised slightly above ground level, sitting on small diameter piles.


SGN10-18

The voids beneath the wall and between the piles can be filled with soil/permeable fill leaving no indication that the finished wall is supported above the ground, allowing important tree roots to be retained intact.

SGN 10-19

SGN 10: Explanatory notes and examples

Technical reference

Due to copyright restrictions, the relevant British Standard clauses are summarised, not quoted, as follows:

1. ***BS 5837 (2012) Trees in relation to design, demolition and construction – Recommendations:*** *Clauses 7.5 (Special engineering for foundations within the RPA) and 7.6 (Subterranean construction within the RPA) recommend:*
   - *7.5.1 Traditional strip footings can result in extensive root loss and should be avoided, but specially engineered structures may be justified if this allows good quality trees to be retained. Foundation designs should consider existing levels, proposed finished levels, and cross-sectional details. Site-specific and specialist advice regarding foundation design should be sought from the project arboriculturist and an engineer.*
   - *7.5.2 Root damage can be minimised by using piles supporting beams, laid at or above ground level, with site investigation down to a minimum depth of 60cm to determine their optimal location. Alternatively, structures can be cantilevered to avoid roots identified by site investigation.*
   - *7.5.3 Slabs for minor structure should bear on existing ground level, and should not exceed an area greater than 20% of the existing unsurfaced ground.*
   - *7.5.4 Slabs for larger structures should be designed with an irrigation system and a ventilated air space between the underside of the slab and the existing soil surface. The design should take account of any effect on the load-bearing properties of underlying soil from the redirected roof run-off and prior approval should be sought from the building control authority.*
   - *7.5.5 The smallest practical pile diameter should be used to reduce the possibility of striking major tree roots. Small piles also reduce the size of the rig required and can reduce the need for access facilitation pruning. The pile type should be selected to protect RPAs from the potentially toxic effects of uncured concrete, e.g. sleeved bored pile or screw pile.*
   - *7.6.1 Where subterranean basement are proposed within RPAs, it is essential to avoid excavating down through rootable soil. It might be technically possible to form the excavation by undermining the soil beneath the RPA.*

Site Guidance Note 11: Installing services in root protection areas

SGN 11: Summary guidance for site operatives

Administration

1. Unauthorised damage to protected trees is a criminal offence and could lead to enforcement action.
2. Work under the normal site risk assessment procedures and comply with the wider site safety rules.
3. Brief operatives entering root protection areas (RPAs) by the supervising arboriculturist before work starts.

Other relevant SGNs

4. Monitor works in RPAs by the supervising arboriculturist (See SGN 1 Monitoring tree protection).
5. Design access to avoid soil compaction (See SGN 3 Ground protection).
6. Minimise excavation into original undisturbed soil (See SGN 7 Excavation in root protection areas).

Important reminders

7. Trenchless installation will be preferred. The fall-back approaches of hand-dug broken trench and then hand-dug continuous trench, will be acceptable if agreed by the supervising arboriculturist.
8. For trenchless installation, the starting and finishing pits will be outside RPAs.

SGN 11: Explanatory notes and examples

Purpose

SGN 11 describes the practical requirements for installing new services within RPAs, based on the recommendations in BS 5837 (7) and the guidance in NJUG (4.1).

General principles and clarifications

Excavation to upgrade existing services or install new services in RPAs may damage retained trees. Where possible, all services will be outside RPAs and installation in RPAs will only be chosen as a last resort. If installation within RPAs is being considered, as advised in 4.1.3 of the NJUG guidance, the decision will be made in consultation with the supervising arboriculturist before any work is carried out. If service installation is agreed within RPAs, the NJUG protocol as set out in 4.1.3 of its guidance will be used to decide the most appropriate method. In summary, this sets out that "Acceptable techniques in order of preference are; a) trenchless, … b) Broken trench – hand-dug … c) Continuous trench – hand-dug". If trenchless methods are to be used, the starting and finishing pits dug at each end of the service run will be outside RPAs. Where a hand-digging option is agreed, any roots discovered during the excavations will be dealt with as described in SGN 7 (Excavation in root protection areas). Backfilled material around excavated services will not be heavily compacted, observing the specific advice provided in 4.1.5 of the NJUG guidance.

SGN 11: Explanatory notes and examples

Conventional installation of services digging a trench with a machine is **not permitted** in RPAS.

Trenching with machines to install services close to trees can make them unsafe and cause their premature death.

Thrust boring is the preferred option for installing service routes through the RPAs of retained trees.

SGN 11: Explanatory notes and examples

The start and finish pits for thrust boring are substantial and must be outside of RPAs.


SGN 11-04

Alternatives to thrust boring are to hand-dig broken or continuous trenches, so that roots can be retained (with the service ducting threaded beneath). Note the ground protection boards with soil piled on top on the left.


SGN 11-05

Ducting services that have to be threaded through existing roots is good practice because it reduces the need to excavate in the future. Note the hessian protection over roots while they are temporarily exposed to prevent sunscorch and drying.


SGN 11-06

SGN 11: Explanatory notes and examples

Technical reference

Due to copyright restrictions, the relevant British Standard clauses are summarised, not quoted, as follows:

1. ***BS 5837 (2012) Trees in relation to design, demolition and construction – Recommendations:*** *Clause 7 (Demolition and construction in proximity to existing trees) recommends:*
   - *7.1.3 The installation of underground utility apparatus using trenchless technology will be acceptable where entry and retrieval pits can be formed outside the RPA. Even if the utility installation does not require planning permission, the work should still be undertaken in accordance with the guidance in NJUG Volume 4, issue 2.*
   - *7.7.1 Care should be taken when routeing underground apparatus because the mechanical trenching can sever roots and change the local soil hydrology, both of which can adversely affect tree health. Wherever possible, underground services should be routed outside RPAs. If services are installed within RPAs, it is preferable to use common ducts, with inspection chambers sited outside the RPA.*
   - *7.7.2 Underground services within the RPAs should be shown on a plan prepared in conjunction with the project arboriculturist. Trenchless insertion methods should be the preferred option, with entry and retrieval pits outside RPAs, but if roots can be retained and protected, excavation using hand-held tools might be acceptable for shallow service runs.*

2. ***National Joint Utilities Group ("NJUG") Guidelines for the Planning, Installation and Maintenance of Utility Apparatus in Proximity to Trees – Issue 2*** *(www.njug.org.uk/wp-content/uploads/2016/09/V4-Trees-Issue-2-16-11-2007.pdf): Section 4.1 (How to avoid damage to trees – Below ground) advises:*

   "4.1.3 Realignment: Whenever possible apparatus should always be diverted or re-aligned outside the Prohibited or Precautionary Zones. Under no circumstances can machinery be used to excavate open trenches within the Prohibited Zone.

   Where works are required for the laying or maintenance of any apparatus within the Prohibited or Precautionary Zones there are various techniques available to minimise damage. Acceptable techniques in order of preference are;

   a) Trenchless: Wherever possible trenchless techniques should be used. The launch and reception pits should be located outside the Prohibited or Precautionary Zones. In order to avoid damage to roots by percussive boring techniques it is recommended that the depth of run should be below 600mm. Techniques involving external lubrication of the equipment with materials other than water (e.g. oil, bentonite, etc.) must not be used when working within the Prohibited Zone. Lubricating materials other than water may be used within the Precautionary Zone following consultation and by agreement.

SGN 11: Explanatory notes and examples

b) Broken Trench – Hand-dug: This technique combines hand dug trench sections with trenchless techniques if excavation is unavoidable. Excavation should be limited to where there is clear access around and below the roots. The trench is excavated by hand with precautions taken as for continuous trenching as in (c) below. Open sections of the trench should only be long enough to allow access for linking to the next section. The length of sections will be determined by local conditions, especially soil texture and cohesiveness, as well as the practical needs for access. In all cases the open sections should be kept as short as possible and outside of the Prohibited Zone.

c) Continuous Trench – Hand-dug: The use of this method must be considered only as a last resort if works are to be undertaken by agreement within the Prohibited Zone. The objective being to retain as many undamaged roots as possible."

Site Guidance Note 12: Landscaping in root protection areas

SGN 12: Summary guidance for site operatives

Administration

1. Unauthorised damage to protected trees is a criminal offence and could lead to enforcement action.
2. Work under the normal site risk assessment procedures and comply with the wider site safety rules.
3. Brief operatives entering root protection areas (RPAs) by the supervising arboriculturist before work starts.

Other relevant SGNs

4. Monitor works in RPAs by the supervising arboriculturist (See SGN 1 Monitoring tree protection).
5. Design access to avoid soil compaction (See SGN 3 Ground protection).
6. Minimise excavation into original undisturbed soil (See SGN 7 Excavation in root protection areas).
7. Install hard landscaping according to SGN 9 Installing / upgrading surfacing in RPAs, and SGN 10 Installing structures in RPAs.

Important reminders

8. No heavy mechanical cultivation such as ploughing or rotavation.
9. Agree the precise extent of any increases above the original ground level with the supervising arboriculturist.
10. Do not raise original ground levels within 1m of retained trees unless authorised by the supervising arboriculturist.

SGN 12: Explanatory notes and examples

Purpose

SGN 12 describes the practical requirements for soft and hard landscaping to avoid damage to retained trees, based on the recommendations in BS 5837 (8) and BS 3998 (6.3). It assumes that the design and technical specifications prepared for the site contractors comply with the relevant British Standards, and in particular, *BS 8545 (2014) Trees: from nursery to independence in the landscape – Recommendations*.

Note: Soft landscaping includes the re-profiling of existing soil levels and covering the soil surface with new plants (grass or shrubs) and/or an organic mulch. Any new hard surfacing and structures will be installed as described in SGN 9 (Installing surfacing in root protection areas) and SGN 10 (Installing structures in root protection areas).

The RPA of this tree **was not** effectively protected during construction and excessive compaction of the soil meant it died soon after this turf covered up the damage.

SGN 12-01

Soil **should not** be heaped against trunks and no level changes should occur within 1m of the trunk unless authorised by the supervising arboriculturist. The raised soil levels against this trunk and across the RPA caused the decline of this tree.

SGN 12-02

SGN 12: Explanatory notes and examples

Healthy mature trees had adjacent soil levels raised by over a metre in their RPAs because provision was made for load spreading and aeration.

This tree had tarmac parking within its RPA that was removed and replaced with an organic mulch near the trunk and limited no-dig surfacing on the outer edges of its RPA.

SGN 12: Explanatory notes and examples

Technical reference

Due to copyright restrictions, the relevant British Standard clauses are summarised, not quoted, as follows:

1. ***BS 5837 (2012) Trees in relation to design, demolition and construction – Recommendations:*** *Clause 8 (Site works, landscape operations and management) recommends:*
   - *8.4 Avoid soil compaction around existing trees and in areas where new planting is proposed. Where soil compaction has occurred within RPAs, arboricultural advice should be taken on how to mitigate risk of further damage to roots before carrying out any remedial or other works. Any cultivation within RPAs should be undertaken carefully by hand, but no heavy mechanical cultivation such as ploughing or rotavation should occur. Decompaction measures include forking, spiking, soil augering and tilthed radial trenching should be carried out with care to minimise the risk of further damage to roots.*

2. ***BS 3998 (2010) Tree work – Recommendations:*** *Clause 6.3 (Aeration/decompaction) recommends:*
   - *6.3 Decompaction works should be controlled so that major roots greater than 2.5cm in diameter are not damaged. Avoid extensive cultivation such as ploughing or rotavation in RPAs.*