ARBORICULTURAL IMPACT ASSESSMENT

(in accordance with BS 5837:2012 - *Trees in relation to design, demolition and construction – Recommendations)*

Site: **land off Silver St, Barrow Upon Humber, North Lincs**

Prepared for: **Charworth Homes**

Date: 4th July 2022

Reference: QU-792-22-EQUANS

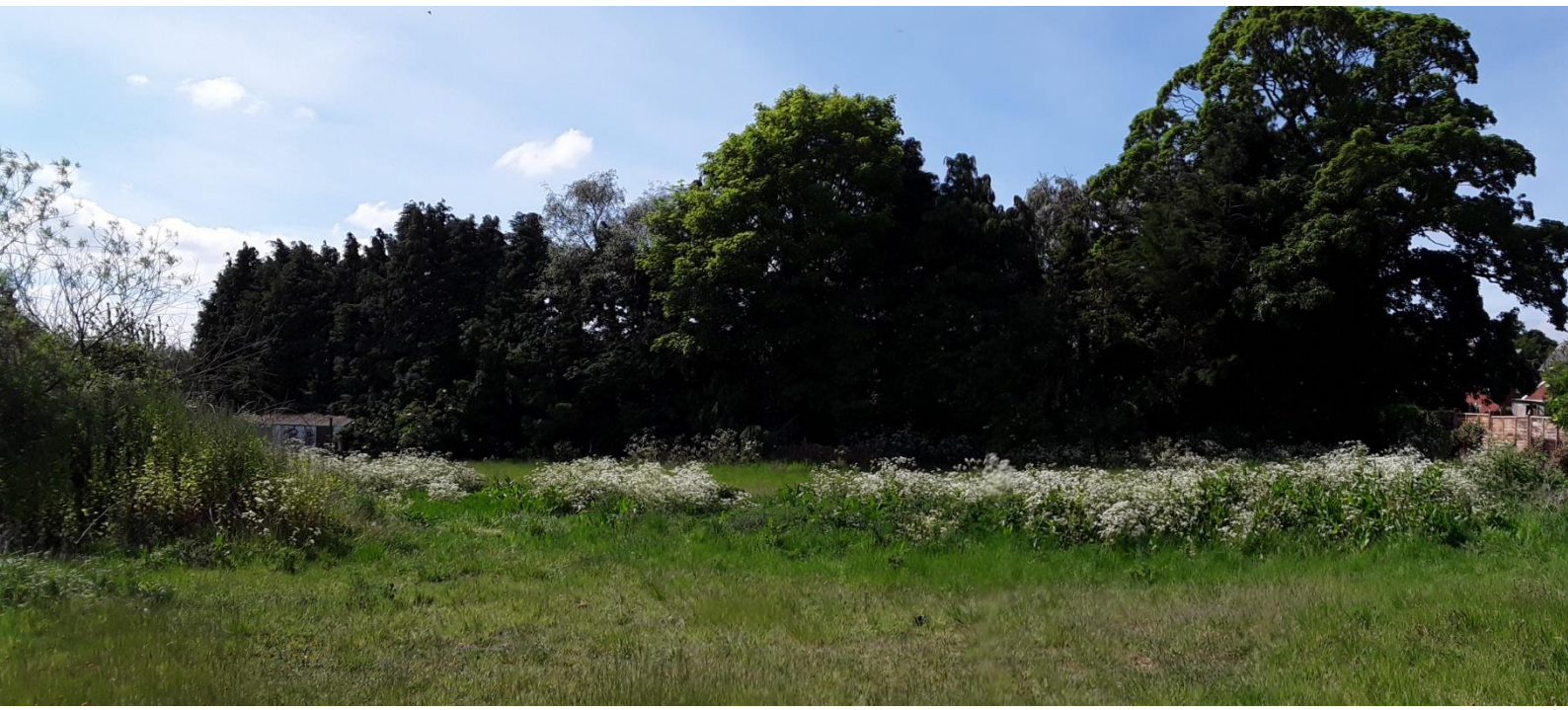
Surveyor/Report Author: **Andrew Hudson** ND Btec Forestry/Arb / TechArborA

Senior Arboricultural Consultant

Arboricultural ASSOCIATION Technician Member

andrew.hudson@engie.com / 07979 303 536 / dina.mysko@engie.com / 07971 804 783

EQUANS - Arboricultural Consultancy, New Oxford House, 2 George Street, Grimsby, North East Lincolnshire, DN31 1HB



Client Details: **Charworth Homes**
James Pearson
82 Oswald Road,
Scunthorpe,
North Lincolnshire,
DN15 7PA
Email: James Pearson [redacted]

Agent Details: **Lincs Design Consultancy**
Ricky Newton
12 Vickers Lane
Louth
Lincolnshire
LN11 9PJ
T: [redacted]
M: [redacted]
Email: Ricky Newton [redacted]

CONTENTS

APPENDICES

Note: This AIA should be read in conjunction with the submitted formal Arboricultural Report, Tree Survey Schedule, Tree Constraints Plan and accompanying plan/s

1.0 PURPOSE OF ASSESSMENT

1.1 Using the information detailed within the formal Arboricultural Report and the preparation of a revised design/layout for the site, this assessment will evaluate the direct and indirect effects of the proposed residential development. This assessment is supported by and should be read in conjunction with the following:

- Arboricultural Report – (Arboricultural Report/Survey)
- Tree Survey Schedule - (Appendix "A" of the Arboricultural Report)
- Tree Constraints Plan – (Appendix "B" of the Arboricultural Report)

1.2 ***Terms of Reference***

EQUANS Arboricultural Consultancy has been instructed to prepare an Arboricultural Impact Assessment (AIA). This assessment will comply with the recommendations and guidance set out within the BS 5837:2012 Trees in Relation to Design, Demolition and Construction and will take account of the effects of any tree loss required to implement the design, and any potentially damaging activities proposed in the vicinity of retained trees/hedges.

1.3 ***Description of Development***

A revised design/layout has been prepared and made available for the purpose of this AIA. It is proposed to develop this site with the introduction of six detached residential dwellings with associated access, driveways and amenity garden space. The principal access into the site is expected to be created just off Silver Street.

1.4 ***Proposed Design / Layout***

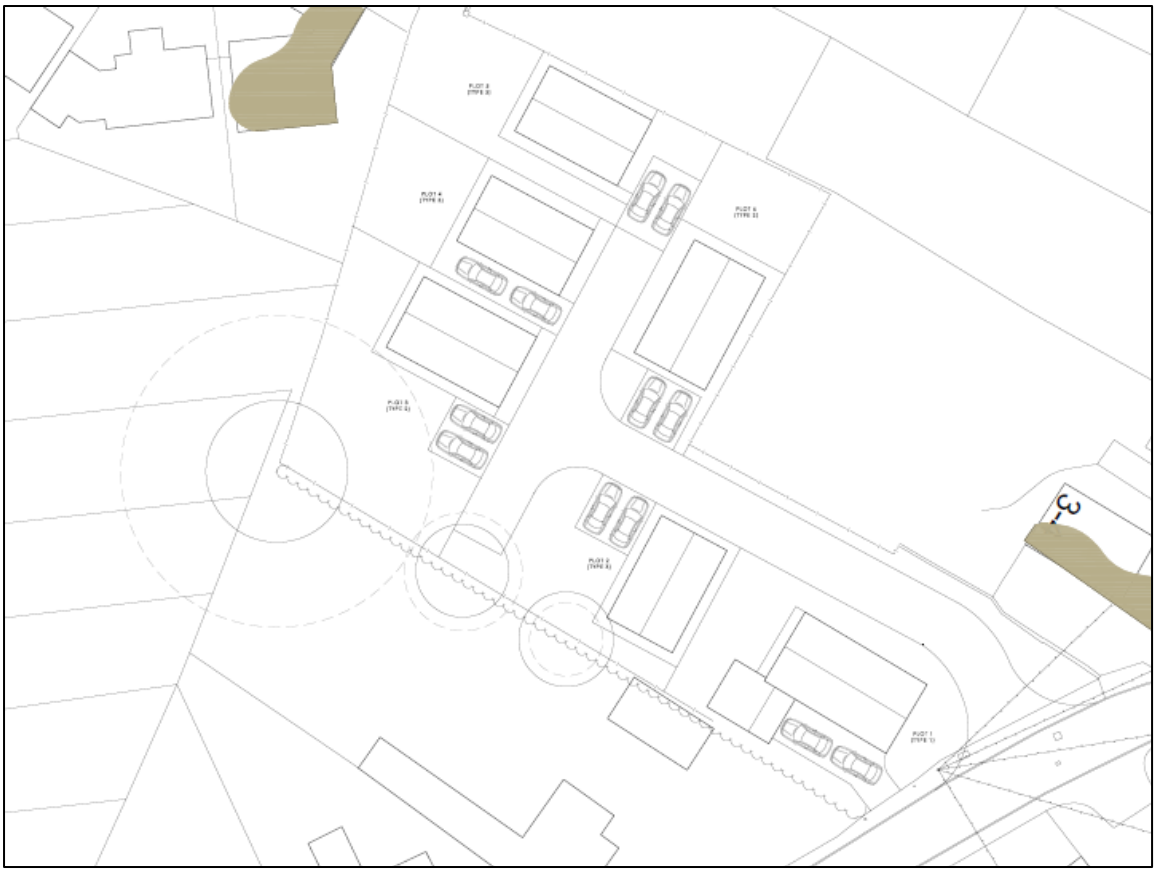


Image source: © Lincs Design Consultancy (2022) – *Plan Drw No.* LDC3898-SK-02A (A1) Proposed Site

2.0 CURRENT ARBORICULTURAL BASELINE DATA

2.1 Referring to the tree survey data and formal Arboricultural Report the quality and value of the existing tree stock has been evaluated (also see Appendix "B" – 'Tree Constraints Plan' within the Arboricultural Report) with the following conclusion:

Category Grading (see 2.2 Cascade Chart)									
A1	A2	A3	B1	B2	B3	C1	C2	C3	U
			T3			T1	G1		
						T2	G2		
						T4	G3		

2.2 *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**.*			See Table 2
	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)	See Table 2
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	See Table 2
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	See Table 2

Image source: © The British Standards Institution (2012) – *Cascade chart for tree quality and assessment* – British Standard BS 5837:2021

3.0 TREE SURVEY

3.1 In accordance with the BS 5837:2012 *Trees in Relation to Design, Demolition and Construction – Recommendations,* a tree survey has been undertaken, recording the relevant data regarding the sites tree population, enabling a distinction of the tree stock according to quality and value. This assessment is informed primarily by the condition of the trees and their future potential. As well as the quality and value of the tree stock, trees are assessed according to an estimate over remaining time over which trees can be reasonably retained. Four categories are set out within the BS 5837:2012, as per the 'Cascade chart for tree quality assessment' (see Page 6 - 2.2). Species longevity, age class, physiological condition and structural integrity are all taken into consideration in order to arrive at the appropriate category grading.

3.2 ***Tree Stock***

Referring to the tree survey data informed by the topographical survey, there are 4 individual trees and 3 groups of trees. The trees age class distribution falls mostly within the semi mature classification. In terms of tree quality and value the assessment concluded:

A1	High (quality & value)	0 individual tree
B1	Moderate (quality & value)	1 individual trees
C1	Low (quality & value)	3 individual trees
U	Unsuitable for Retention	0 individual trees

3.3 ***Groups of Trees***

The tree survey has determined it appropriate to include some trees within the "Group" classification. The term "Group" is intended to identify trees that form as cohesive arboricultural features. However, an assessment of individual trees within the group has still been undertaken in order to highlight any significant variation in attributes, including physiological and structural condition.

3.4 3 groups of trees have been assessed. The group tree stock numbers are as follows:

- G1 – approx. 15 x individual trees
- G2 – approx. 60 x individual trees
- G3 – approx. 5 x individual trees

(Total individual trees within groups 1, 2 & 3 = approx. 80

A2	High (quality & value)	0 groups of trees
B2	Moderate (quality & value)	0 groups of trees
C2	Low (quality & value)	3 groups of trees

4.0 DEVELOPMENT PROPOSAL

4.1 Following an appeal decision on the 22nd of March 2022, appeal reference: APP/Y2003/W/21/3288458, the developer has made significant alterations to the scheme. Specifically, concerns had been raised in regard to the functionality of the private amenity garden spaces due to the relationship with retained trees. The developer accepts the Planning Inspectors decision, that the initial design/layout may have failed to provide an acceptable standard of amenity for future occupiers. In order to address the concerns raised, the developer has made significant alterations to the scheme, increasing the size of amenity garden space and reducing any perceived nuisance from retained trees. In addition to the increase in garden space and to ensure minimal impact on trees the revised layout now excludes any significant encroachment into the RPA of retained trees.

4.2 Due consideration has been given to the existing tree stock and a balanced judgement has now been made with regards to the future relationship with trees in context with the proposed land use. A number of trees have been identified as category 'C' trees. In accordance with the proposed design layout 1 individual tree and 3 groups of trees, all categorised 'C', (T1 & G1, G2, G3) are expected to be removed.

4.3 Irrespective of category grading, trees T2, T3 and T4 are located off-site. These trees are within influencing distance to the proposed development either by the below ground constraints represented by the RPA or above ground constraints by virtue of size and position. Due to tree ownership, there will be limitations to any proposed works that may be deemed necessary in order to facilitate the development of the site or for the management of any perceived nuisance. It should be recognised that although trees T2, T3 & T4 are located off-site, under established 'common law' pruning branches and roots is permitted without the owner's consent. There is a legal duty, however, to take 'reasonable care' whilst undertaking any works, and there is possible liability if the tree is damaged, or it has become unstable. Generally, it would be sensible to inform the tree owner prior to works taking place and it would be beneficial to first consult an arboriculturalist with regards to the most practical solution to any given circumstance. For any works that may take place it should be recognised that for any parts cut off from the tree, these remain the property of the tree owner, and therefore should be offered back to the tree owner.

4.4 It is proposed to develop this site to form a residential led development of several dwellings with associated access, driveways, garages and garden space. It is proposed to access this site from Silver Street. Generally, it would be reasonable to suggest that in any circumstance the land use is expected to change to residential. On this basis a realistic judgement has been made

in terms of the probable impact the retained trees may have on the development of the site and its future users. The removal of trees as proposed is considered acceptable considering the species, low quality and low value and limited future prospects. Misplaced tree retention should always be avoided.

5.0 ARBORICULTURAL IMPLICATIONS ASSESSMENT (AIA)

5.1 For the preparation of this AIA, I have been supplied with a revised design/layout for the site. The implications of development in accordance with the supplied design/layout are as follows:

5.2 ***Implications of Development*** *(also refer to Appendix "A" Tree Retention & Removal Plan)*

a) Direct Loss of Trees:

- 1 individual trees (T1) and 3 groups of trees (G1, G2 & G3) have been identified for removal in order to facilitate the successful development of the site.

b) Direct Impact of Tree Loss:

The tree survey, as identified within the arboricultural report, shows in total approx. 84 trees, inclusive of groups G1, G2 & G3. Out of the 84 trees approx. 81 trees are proposed for removal. It should be recognised that groups G1 & G2 are effectively hedgerow trees, Leylandii plants that, due to undermanagement, are establishing as individual trees. This accounts for the high numbers.

Description	Tree Nos.
Trees surveyed	84
Total trees removed to facilitate development	81

5.3 The tree population associated with this site is located along the site boundaries, specifically the southern boundary. The southern boundary does have a sizable density of canopy coverage as a linear feature; however, it may be reasonable to suggest that groups G1 and G2 would constitute as a hedgerow and therefore explains the high stem count. Trees T2, T3 and T4 are included as 'trees retained'. The basis for this, irrespective of categorisation, is that they are located off-site and therefore outside of the ownership and responsibility of the developer. Those trees identified for removal, T1, G1, G2 and G3, are considered to be of low quality and value with limited long-term prospects. Removal, as proposed, would have very little impact on the landscape character of the area and considered to be inconsequential.

5.4 ***Indirect Impacts***

a) **Changes in Ground Level:**

There is not expected to be any changes in ground levels within the RPA's of retained trees.

b) **Changes in Ground Surfaces within the RPA:**

There is not expected to be any significant ground surface changes within the RPA of retained trees. The only obvious conflict is with T2, where there is encroachment into the RPA from the hard surface access road. However, it should be acknowledged that encroachment is minimal. The total RPA area of T2 is 79.8 m². There is an actual encroachment into the RPA of only 7m². Being very much below 20% of the RPA area, this encroachment is considered tolerable and would not have a significant negative impact on the trees health. Generally, for all retained trees only soft landscape finishes to the amenity garden spaces are proposed within the RPA's.

c) **Structures within the RPA:**

There is not expected to be any structures placed within the RPA of retained trees.

5.5 ***Changes in Site Use and Tree Management***

a) **General:**

Once the initial trees work has been carried out, future management requirements resulting from the proposed development may be periodic crown lifting of the canopies with the reduction of any overhanging branches that may interfere with amenity garden space. Specifically, this is in relation to the overhang of trees located off-site, trees T2, T3 and T4. It should be recognised that under established 'common law' the pruning of overhanging branches is permitted without the owner's consent (refer to page 8, 4.3).

b) **Roads and Footpaths:**

There is not expected to be any tree management requirements for the public highway infrastructure.

c) **Potential Root Damage to Infrastructure:**

There is no evidence to suggest the roots of the trees have damaged structures or hard surfaces. Provided the proposed development is constructed taking into consideration the below ground constraints, it is unlikely damage will occur from roots.

5.6 ***Potential Nuisance***

a) **Apprehension:**

The revised layout and internal arrangement have been modified from that of the original plan and is considered to be more sympathetic to the retained tree population. It should be recognised that the scaffold structure of the trees is such that does not raise any particular concerns; for example, there are no heavy laterally spreading branches and no particular lean

of the canopy area into the amenity garden space of plots 2 & 3. The trees height, measured from the base, ranges between 11m and 15m, therefore only moderate in height. There is considered to be a tolerable distance between trees and structures.

b) **Shade:**

The revised design/layout and internal arrangement has taken account of the retained trees and the availability of light is not expected to be a particular inconvenience. In addition to the increase in amenity garden space the removal of groups G1 and G2 will introduce a substantial amount of light to this part of the site. This combined with the recommended pre-development tree works will ensure the availability of light is acceptable, with shade being reduced to a tolerable level.

d) **Tree Litter:**

All trees produce a litter of some description, which is only a natural occurrence that is unavoidable. Management requirements such as the removal of leaf litter and the cleansing of hard surfaces will be the responsibility of the dwelling occupier. Occasionally the amount of litter a tree produces could be reduced slightly through appropriate pruning; however, it would never be eradicated. Where conflicts may arise through seasonal nuisance, the detailed design could address these issues, e.g., use of non-slip paving and provision of leaf guards or grills on gutters and gullies.

Please Note:

In a community context, it is generally accepted that trees provide a significant benefit to society, and it is reasonable for individuals to tolerate some level of inconvenience from their presence.

6.0 CONCLUSION

6.1 The formal tree report and survey reveals an existing tree stock that is mostly considered to have low quality and value. Those trees that merit retention, specifically T3, a category “B” tree, has been given serious consideration and has been sympathetically incorporated into the revised design/layout. Likewise, category ‘C’ trees located off-site, although within influencing distance, these have also been incorporated into the revised design/layout.

6.2 It is accepted that trees located off-site may present some constraints in terms of how this site is developed. However, taking into consideration the Planning Inspectors comments in reference to the appeal decision, significant changes have been made to the design/layout. The revised scheme is considered to be much more sympathetic to those trees located off-site and combined with the recommended specification of tree works, this will provide an acceptable solution to the concerns raised by the Planning Inspector.

6.3 As a consequence of this development the removal of trees, as proposed, is considered inconsequential and will not have a significant impact on the landscape character to this part of Barrow Upon Humber. Those trees that have been identified for removal are considered to be of low quality and value with very limited future prospects. For those trees identified for retention, measures have been put in place to ensure successful retention.

7.0 PERSONAL PROFESSIONAL STATEMENT

(Andrew Hudson ND Btec Forestry/Arboriculture / TechArborA)

Acting consultant preparing reports for various organisations including British Standard reports for architects and developers in supporting planning applications.

Andrew holds a Btec National Diploma in Forestry and Arboriculture which was awarded at distinction level.

Andrew began working with trees as a forestry contractor, obtaining extensive knowledge and practical experience on various contracts throughout Lincolnshire, East Midlands, East Yorkshire, and East Anglia. Having worked for a number of years within the forestry sector Andrew moved to arboriculture, eventually becoming a fully qualified tree surgeon. This presented a broad spectrum of experience in arboriculture, which was enough to acquire the position of Arboricultural Officer at Local Authority level. This provided valuable experience in all aspects of arboriculture providing him with an inclusive insight into the social, legal and safety issues associated with the management of urban trees in the planning system and Local Authority owned tree stock.

Andrew is part of EQUANS Arboricultural Consultancy providing a service advising on a whole range of tree issues.

Arboricultural ASSOCIATION Technician Member No. TE04053

Appendix "A"

Tree Retention & Removal Plan

Trees to be removed

Trees to be retained

Tree Removal

1 individual tree and 3 groups of trees to be removed in order to sucessfully facilitate the development of the site

Tree Works Specification

- **T1 - Lilac** - Fell
- **T2 - Sycamore** *(off-site)* - Reduce north east side canopy overhang into the site by 5m, cutting back to viable growth points where practically possible, to leave a finished canopy spread of approx. 2m, measured from the base of the tree. Crown lift north east side canopy spread by up to approx. 5m, cutting back to the boundary line. Re-shape accordingly.
- **T3 - Sycamore** *(off-site)* - Reduce north east side canopy overhang into the site by 5m, cutting back to viable growth points where practically possible, to leave a finished canopy spread of approx. 2m, measured from the base of the tree. Crown lift north east side canopy spread by up to approx. 5m, cutting back to the boundary line. Re-shape accordingly.
- **T4 - Silver Birch** *(off-site)* - Reduce north east side canopy overhang into the site by 1m, cutting back to viable growth points where practically possible, to leave a finished canopy spread of approx. 3m, measured from the base of the tree.

Groups of Trees

- **G1** - Fell
- **G2** - Fell
- **G3** - Fell

REVISIONS

Letter	Amendment	Drawn	Date

ARBORICULTURAL CONSULTANCY

EQUANS

New Oxford House
2, George Street
Grimsby
North East Lincolnshire
DN31 1HB
Tel: 01472 324271

CLIENT	Charworth Homes
PROJECT	Residential Development land off Silver St, Barrow Upon Humber
TITLE	Tree Retention & Removal Plan

DRAWN	CHECKED	APPROVED
AH	-	-
DATE	**ORIGINAL SIZE**	**SCALE**
21st June 2022	A1 (594 x 841)	1:150
FILE REF	**DRAWING No.**	**REVISION NO**
AH-ENGIE	TRRP_03_210622	RevNo.3

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